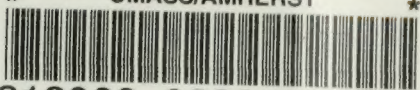


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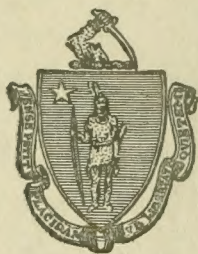
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The Beekeepers' Review

Published Monthly



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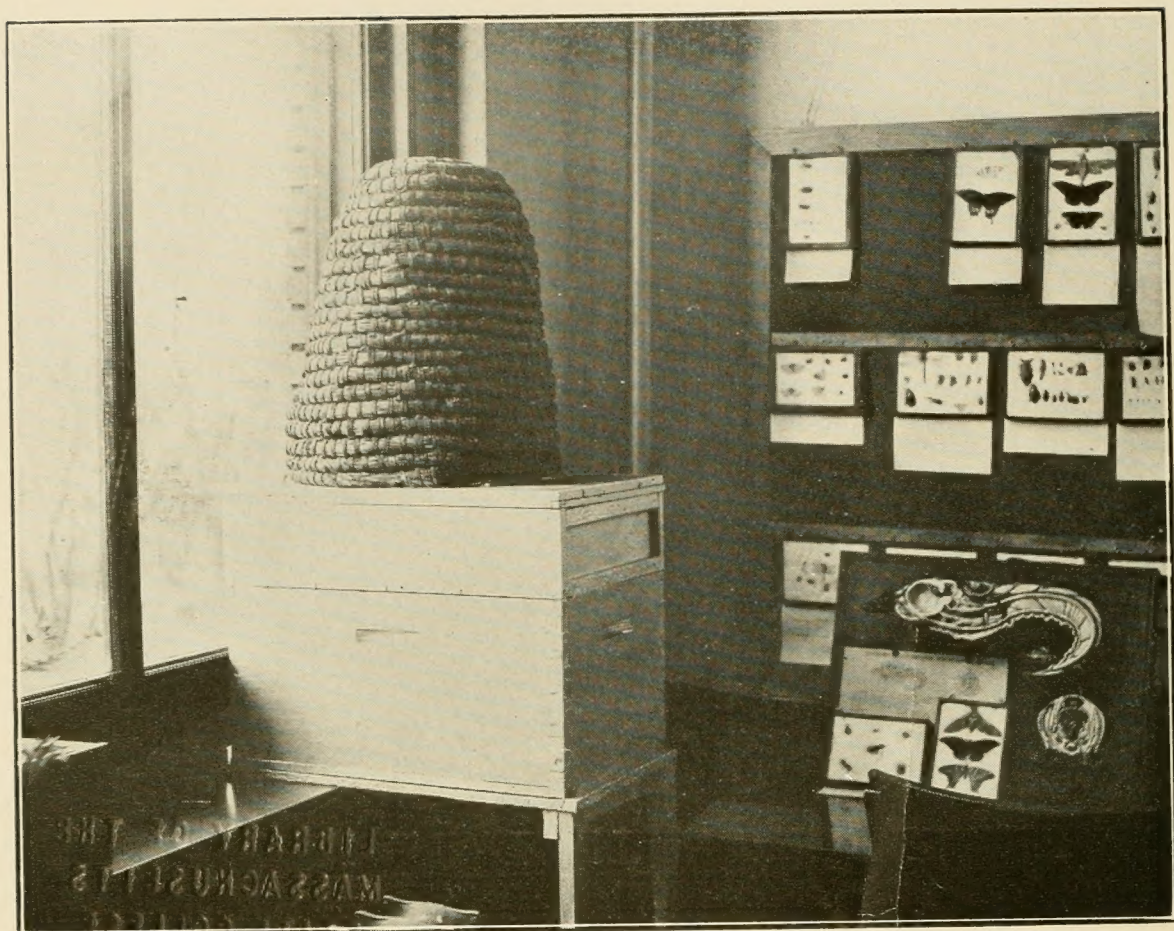
ONE DOLLAR PER YEAR

National Co-operative Buying of Supplies

Look over the columns of the REVIEW before you place your order for your 1914 bee-keepers' supplies, and see if your old friend, the supply man, is patronizing you, by patronizing the advertising column of your REVIEW. If he has forsaken you, by not patronizing the REVIEW with a portion of his advertising, it is time something was done. In case you are left to "paddle your own canoe" in this case, the thing to do is to send your order here to this office, and buy your supplies through the REVIEW. If you care to have us buy your supplies for you, the procedure will be as follows: We will suppose you have been in the habit of using Jones' bee supplies and still want their make; send us just the same money with your order that you have been accustomed to; then we will fill your order direct from the manufacturer you request. Remember, friends, that we issue no supply list, and have our own advertising medium, the REVIEW, so you can expect us to do this work for you on a very close co-operative basis. Our motto: Buy your supplies for less money during this season than last. You now have an opportunity never offered you before to buy your supplies direct, on the co-operative plan made possible by your owning the REVIEW.

The opportunity is now open to you, brother, will you take advantage of this splendid chance to better yourself financially? Do not forget your neighbor. He may be paying larger bills for his supplies than is necessary. Get him to club with you and by so doing both of you save by buying in larger quantities, also on freight charges. Remember, no order too small, and no order too large. When you approach your neighbor, do not forget your best friend, the National and the REVIEW, tell him he will need them both in his business in the future, for we expect to make them both so valuable to the producer that they cannot afford to be without them. It is up to you, Mr. Producer, we are here to do our part. Kindly address all your 1914 orders for bee-keepers' supplies to

*The National
Bee-Keepers' Association
Northstar, Michigan*



"I put up an outfit for a teacher in the High School, two years ago. This school is right across the street from the outfit I put up twenty years ago. She got over one hundred and fifty pounds from it this year while away on her vacation." *See next page.*

Very Important.

We are sending this number to all whose subscription expired in December, with a second request that you renew your subscription to the REVIEW.

The postal regulations prevent us sending more numbers without the subscriber's order, so you who have not renewed your subscription, or in some way authorized us to continue sending the REVIEW, will receive no more numbers.

We expect to do much more for our subscribers during this than last year, and you cannot very well afford to allow your subscription to lapse at the present time. *"Do it today!"*

The Bee-Keepers' Review

Established in 1888 by the late W. Z. Hutchinson.

OFFICIAL ORGAN OF THE
NATIONAL BEE-KEEPERS' ASSOCIATION
AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, NORTHSTAR, MICH.
WESLEY FOSTER, Assistant Editor, BOULDER, COLO.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII.

NORTHSTAR, MICHIGAN, JANUARY 1, 1914

No. 1

Bees in Building—The Pearce Method of Bee-Keeping

By J. A. PEARCE, Grand Rapids, Mich.

The Farmer and Business Man's Series.

TWENTY years ago I began to put bees in buildings. One of the first I put up for Wm. Widdicomb in his stable loft. I had known for some time that bees had been kept in small rooms or large places prepared for them and left to themselves to build their combs as they pleased. I was told that they would eventually fill these upper rooms or boxes, and stay there from year to year and would not swarm out, and that the people of the house could go up in the winter when the bees were dormant and open these places and cut off honey for themselves as wanted. This looked attractive to me, but it was said that the moths would get in and destroy the whole business, and I did not like this chunk honey, as it would not be neat and nice, so with this much information I started in to see if I could devise something with our movable frame hives, large enough so the bees would not swarm and so the moths could not eat them up, and that we might get the honey in nice one-pound boxes, as we were getting it out in our bee yard.

The first outfit that I rigged up was three hives set side by side.

Jan. 16, 1946

I cut holes into these outside hives from the middle one, so the bees could go through. Then I let the bees fly out doors from the middle hive, and I put my surplus cases on the middle hive. The bees soon began to fill these cases, but to my surprise and regret, I could not get the bees to go into these side hives. This, I said, was of no use and I took away these side hives and shut up the openings and put one of them on top of the middle hive and put my surplus cases on top of all. Very soon the queen began to fill this body with brood instead of swarming out, and I soon had seventy-five pounds of nice comb honey in the cases and was delighted. I then saw that I had been making a mistake in making my hive broad instead of high to enlarge it. Our bee-keepers think, many of them, that they should have a larger hive than the eight frame, and add ten, twelve or even fourteen frames in width instead of putting two of the eight-frame hives—one above the other, as I did twenty years ago, making a tall hive more like a hollow tree—the natural home of the bee.

This hive that is about a quarter larger than the large hive that the Dadants use is about the right capacity for a queen to deposit all the eggs she wishes for the colony, so there will be no swarming if sufficient surplus cases are put on in time so the honey may be carried above, so as to leave adequate space for the queen. Then again it is about the right size and form to enable the bees to store an ample supply to carry them through any Winter and Spring without danger of starvation. Now, after twenty years use, I do not see any need of changing to anything different, as it makes possible so many things, which I will speak of later. This, however, is the hive I use and recommend, as it is heavy enough to lift these bodies separately when they are filled.

Last summer, when I took off one hundred pounds of as fine comb honey as you would wish to see, from this outfit where it had been for twenty years, and only making two visits yearly—the one to put on the honey cases and the other to take off the honey—I thought that was as nearly automatic as we could get things in this world. When I realized what an enormous amount of honey is going to waste in this country every year, which takes no fertility from the soil, and could be so easily gathered up, I resolved to do all I could to make this method of handling bees known.

I put up an outfit for a teacher in the High School, two years ago. The school is right across the street from the outfit I put up twenty years ago. She got over one hundred and fifty pounds from it this year while away on her vacation. Last fall the Bissells went to Europe for a year, and their man put on cases for one hundred pounds before they went away, as the house was to be shut up, and those were filled when they returned.

A Miss Rogers, just outside of the city, has three hives. She received \$74.00 worth, wholesale, from them. She says all it cost her

was putting on the cases and lifting off the honey, as she sells the boxes and starters with the honey that weigh eight pounds to the hundred. That will pay for putting in the new boxes and starters. These bees are in the house attic and in an old granary of her father's, in single-walled hives, and I wish to say that I believe double-walled hives are the worst delusion that has ever got hold of the bee fraternity, for they rely upon some kind of packing to bring their bees through. To leave them out in a snowdrift, exposed to all the storms that blow, is equally as bad as putting them down cellar for four or five months among the dead and the dying with no chance for a flight until spring. Bees should be put in buildings above ground where they do not have to be disturbed fall and spring; so arranged that the bee-keeper can see to them any day in the year, and where the bees can have a flight whenever the weather is suitable, and where the bees will, in this big hive with lots of stores, commence brood-rearing very early and be ready for the honey harvest when it comes.

You will please notice, then, that all that goes to bring the results that we get from this method is doubling the size of the hive and placing these hives in buildings where they can be amply protected. This makes all the other things possible which we will tell you about later. There are from one to two hundred of these outfits in and around Grand Rapids, Mich. They have produced from one to two hundred pounds of comb honey this dry year per colony. There has been no swarming, except in one instance where not enough surplus was put on, so if we can produce unlimited comb honey and not have the bees swarm till we wish to double them at the end of the honey flow, it opens to the bee-keepers great possibilities, and if we can produce comb honey instead of extracted it will go far to eliminate foul brood.

If the bees do not swarm out at haying time as formerly, the farmers should produce all their own sweets. It is all about them. They can go up into the attic or out into a building especially arranged for the bees about the first of November, when the bees have all clustered down in this tall hive out of the surplus honey, thus enabling them to lift off their honey supply without seeing or hearing a bee. This should be very attractive to them and will bring them a larger margin for the labor expended than anything else on the farm. Now, in conclusion, this introductory will get us better acquainted and has told you how big a hive I use to get largest results.

I, therefore, think that in my next article I cannot do better than to tell you all I can about buildings for bees and how to best arrange the bees in them for best results, both for the man who only wishes to keep a few colonies and also a building for large apiaries. For our bees should be housed as much as our horses, hens or cattle, and they will pay larger dividends for less labor.

For the bee-keeper with out-yards, what peace of mind it would bring to him to know that his bees are securely housed in buildings out of all danger from storms and marauders, and where they can have a flight at any time when the temperature is suitable.

Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordelia, Ga.

A Critical Period in a Bee-Keeper's Life is When He Reaches 100 Colonies

THE most critical time in a bee-keeper's life, so far as making a sole business of it is concerned, is when he is around the 100-colony mark, for at this point his interest is at a standstill, decline, or incline, as the case may be, which will determine his procedure. I mention this, because so many energetic beginners have started on the journey to success with high ideas and about this point fainted by the wayside or for some reason abandoned the journey. This ought not to be the case, for 100 colonies are not enough to determine the future of a large business. It is just a good starting point and bee-keepers should be encouraged when they reach it to go on. If there ever was a time in my bee-keeping life when I had even the least inclination to stop it was here. But instead of a halt the next season I had made great preparations, and for the first and last time took every cent I had in the bank from my previous season's returns and invested it in bees and fixtures. At the close of the season that year I had a few over 100 colonies, and during that winter I bought enough bees in modern hives to make 127 colonies. I bought 47 colonies in box hives, and in the spring I transferred per my method, and about the same time made some increase, running the number of colonies up to a few over 200. But very early in the spring I established an outer yard, three miles from home yard, of 64 colonies, which were in modern hives, and I built a nice honey house there, which I used for three seasons, when I bought a conveyance and moved the house home. I found it more economical to haul the honey to the home yard for packing, etc.

About the first of March I hired a helper with some experience, whose duty it was to look after the bees and set up supplies, which I had in stock at both honey houses.

Surplus Storage Room Given as Soon as the First Honey Plants Came in Bloom.—(This is Important—Ed.)

I instructed him to give all strong colonies some storing room as soon as the first honey plants came in bloom and to keep a close watch on the brood nest of the strongest colonies, and as soon as he

saw queen cells started to let me know, for I was working at the shop and what I had done up to this time was at times when I was off duty there. Soon the helper reported that he saw a good number of queen cells started in the strongest colonies in each yard. I got off a day from the shop, half of which was spent at each yard, working them over thoroughly, ventilating the hives one inch from the bottom boards by means of two one-inch strips placed on either side the length of hives. Our previous season's experience transferring had taught us that ventilation was beneficial. Storing room was added and the brood nest enlarged where it was needed by setting one or more combs in the center of them, also between 40 and 50 increase made from the very strongest colonies, mostly from those which had contracted the swarming fever and were building cells. This was done by dividing the bees, combs, brood and honey into two equal parts and giving the queen to the half set on the new stand. Some frames of combs and full sheets of foundation were placed in these divided swarms so they might soon finish them up. Complete sets of comb and more frames were added as they needed them.

I went back to work and the helper finished the job, except at the home yard, where I kept close watch on conditions. This about cured the bees of swarming, along with the amount of storing room we gave them, which was always placed next to the brood nest.

The increase was a success and it built up rapid to full colonies, many of which went into the supers storing surplus. June 1st the spring flow was over and considerable honey had already been taken off and marketed. The remainder was soon taken off and prepared for market, and the honey at the outer yard hauled home. This crop of honey consisted of about equal parts comb honey in sections and extracted honey, about 9,000 pounds in all, and netted me \$800.

On July 1st I let my helper go, for I could look after the bees at odd times during the remainder of the year, and during the time between the spring and fall honey flow I had prepared 30 more one-story hives for increase to be made at the approach of the fall flow. When the time came the strongest and heaviest colonies were divided, as was done in the spring, and some of the divisions were allowed to raise their own queens, but during the season I had decided to try some Italian bees, and bought of one breeder 17 queens, which were used successfully in this last lot of increase.

The fall flow that season was light and I did not take off any surplus, but I managed to get full sets of combs built for all colonies that did not have them in the brood nest, and all the bees were in good shape for winter. The ventilating sticks were all removed from under the hives and the bees left for winter, a total of 250 colonies. Also, the transferred colonies were treated as in the previous season.

I did not produce as much honey as I should that season, but I

had greatly increased my bees and I felt good over the situation. All told, I put \$700 in the bank to be expended on the business the next season. During the following winter I bought and set up a good many supplies to have in readiness for the next season, and as opportunities offered I studied bee culture as hard as a lawyer ever studied his law books.

Candy for Winter Stores—Buckets for Chunk Comb Honey.

By C. A. NEAL, Jonesboro, Ind.

EDITOR REVIEW:—In the REVIEW, April number, page 132, you tell how to make the Fuller soft candy for bees. The one point I do not understand is where you say “and you can stir it a very little while cooling.” Do you mean after it has been removed from the stove, or before? (Stir while cooking just enough to keep the temperature of the candy even all over the surface, but not too much, which might have a tendency to cause granulation.—Ed.) I bought of the Tailor Instrument Co., Rochester, N. Y., one of their candy thermometers, scale 20 to 300°, all glass, 12 in. long. It cost me \$2.25. Have a blue flame oil stove, so am ready. Have wood boxes made of $\frac{3}{8}$ in. stuff, one foot square and 2 in. deep, inside measure. Half-inch holes are bored 1 in. apart all over the bottom of the box. Two $\frac{3}{8}$ in. cleats are tacked on bottom of box, near two opposite edges. From eight to twelve pounds of Fuller candy is put into each box. A box of feed is set on top of the frames of each of my frame hives. Papers are laid over box and hive to keep out the packing. The winter case is filled full of clover chaff. I prefer blue grass, as it is nice and clean to handle. The bees will be clustered at the top of the frames on their sealed honey. A long cold spell comes on, they eat up all their honey and cannot break cluster, and as they are sure to be in touch with one of the candy holes, they are saved, otherwise, they die. Do not give box of candy until November 1st. If warm fall, then on December 1st.

In *Gleanings*, Oct. 15th, page 716, Mr. J. E. Hand tells how to spread the combs in winter to conform with nature's ways, so am removing one of the ten combs from each of my hives, taking out one of the two outside combs so as not disturb their winter nest. These removed combs of honey will be fumigated with bi-sul. carbon and returned in the spring, for brood rearing. My winter cases allow 4 in. of packing on all four sides, and 10 in. above. I also use shade boards to shut out the wind and snow. Say now, really, don't you think I should winter those bees? Made 75 per cent on investment from my bees during season of 1913. Will have 63 supered colonies in frame hives for season of 1914. Also a lot of old box hives run for

increase. Have packed and sold my frame comb honey (also extracted) in slip-top gallon tin buckets. Bought of Sears, Roebuck & Co., Chicago. Got them on their bargain page at eight cents per bucket. Bought enameled slip-top covered buckets of Montgomery Ward & Co., at wholesale rate. The one gallon size cost 26 cents per bucket. The ladies much prefer the slip cover bucket about the house, as the friction top kind catch the water on the rim in pouring it out. This rim is in the way when I put a cake of comb honey in the bucket. When packing I prefer a one gallon enameled bucket, white enameled on the inside and blue outside. These buckets can be sold away below cost, and they make the honey go lively, you bet!

(Friend Neal.—You paid a good price for your thermometer. Think they can be furnished for about 75 cents each. We will see. Am not sure that you have openings enough in the bottom of your candy feed box. Why not leave the entire bottom off and by so doing allow the bees more free access to the candy? The slip cover pail is all right for the local trade, but will not answer like the friction top pail for shipping liquid honey. The National can furnish slip-covered pails if they are wanted, but to date we have not had a single call for them. You would have to get a very good profit on your honey if you were to sell a 26-cent pail away below cost. Perhaps this high grade container will help you to get a better price for the honey it contains.—Ed.).

Honey as a Medicine.

By DR. A. F. BONNEY, Buck Grove, Iowa.

I DO not know as I shall be thanked for "butting in" on this proposition of advertising honey as a food and medicine, but have done a great deal of ad. writing in the 60 years I have been on earth, and also sold locally all the honey I have produced and at prices higher than asked by my competitors, and am a doctor of medicine and a registered pharmacist, I hope to be accorded a hearing, notwithstanding that wholesale advertising of honey has been a pet theory with some bee-keepers for many moons.

Advertising is like mining, and I have done both, and in mining thousands of dollars are put into the ground for every dollar taken out. Large sums are sunk in advertising for every dollar returned, and to send out broadcast a lot of folders advertising honey as a "food" and a "medicine" will, I verily believe, be putting money under ground. Unfortunately I cannot point to failure, for there is no possible way to "key" such ads. "Key?" Oh, that is a way advertisers who put good big money into the game have of finding out if an ad. is bringing in results, or if advertising in a certain magazine will "pay." Now, for instance, if I get out a postcard showing an auto-

mobile wreck with the man, baby, pup and woman scattered over the landscape in a laughable way and big sign reading, "If anything happens when you are traveling near Buck Grove, Iowa, stop and get some BONNEY HONEY," and send one of them to the Post Office in Council Bluffs and from it get orders for honey amounting to several dollars, as I did, and also sent one to the editor of *Farmer and Breeder* in Sioux City and got a call for a hundred pounds, as I did, I decide that it is a better postcard for advertising than some other I had made.

We cannot key the pamphlets, and while I cannot believe it a good way to advertise I cannot prove it except by inference, so will pass on.

As to honey being advertised as a food, I think it a wrong idea, for it is not a food, as *people* look at it. People buy honey because it is a delicious sweet; it is *honey*. They know and care nothing about its food value. They do not buy it as a food, hence it is a waste of money to advertise it for a food product.

The United States Dispensatory, which is authority on drugs of all kinds, considered as medicinal substances, says of honey:

"Honey possesses the same medical properties as sugar, but is more disposed to affect the bowels. Though largely consumed as an article of food, it is seldom employed medicinally, except as a vehicle. Its taste and demulcent qualities renders it a useful addition to gargles; and it is sometimes employed as an application to foul ulcers."

That is all it does say, and I may add that at the present time it is practically not used at all, the various "confections" of the past century being practically in total disuse.

Such being the case, why vie with the "patent medicine" fakirs in vaunting honey untruthfully?

There are a few things so well known to ad. writers that they smile when they see pamphlets like the one I allude to, no matter how honest the advertisers, and hoping to do a little good to the bee-keeping world I will give a few ad. writing laws, as follows:

1. The shorter an ad. the more it will be read. One person will read 2,000 words, two may see to notice 1,000, four may peruse a 500-word ad. story, 100 may pay attention to 100 words, 10,000 will see 50 words, a million will stop at two lines, while even the kids playing in the street will stop to look at the word HONEY, for they know what it is, and they want it—to eat.

2. An ad. should be true—for truth's sake.

3. It is hard to advertise continuously unless you have a continuous supply. Honey is hard to advertise continuously, for often the local crop is exhausted early in the season, and to advertise when you cannot supply demand is an utter waste of money. Vide pamphlets.

4. Advertising must be individual. I should be very foolish to advertise to help my competitor, and for that reason the idea of a

national campaign to advertise honey is visionary, and \$600, or \$6,600, would be but an annual drop in the bucket. When a lot of patent medicine sharps started to put "Liquizone" on the market they spent a million dollars advertising it *before they made a bottle of the dope*, then gave away a million 50-cent bottles. The dollar size cost about six cents for bottle, label and dope, for it was nothing but water acidulated with sulphurous acid. They failed, and a month after they quit advertising my stock of it was so dead on my shelves that it smelled.

One hundred million leaflets distributed *annually* would not reach 20 per cent of the population, because they will not read them. I know, because there was a pamphlet circulated for years by Mr. York. It had been written by Dr. C. C. Miller. It contained the statement that "if you see a cake of honey in a jar surrounded by liquid honey it is a sure sign that it is adulterated." I have Dr. Miller's letter thanking me for calling their attention to it. Now think for a minute! Hundreds of thousands of those pamphlets, or leaflets, had been circulating for years among bee-men and such a statement overlooked, simply *because people will not read long ads.* They will *not* stop to peruse long advertisements.

If anyone doubts that this incredible thing happened, ask Mr. Tyrrell, who was editor of the REVIEW when I wrote about it.

What would I do to advertise honey? Well, for just one thing, I'd refer to page 999 of the September issue of the National Geographic Magazine, and gave wide publicity to the story that in excavating in ancient Egypt, in the capital of King Akhenaten, Tell-el-Amarna, there was discovered a jar of honey which was still liquid and still preserved its characteristic scent. Yet it had been lying there three thousand three hundred years.



Field Notes From Iowa.

J. W. STINE, Deputy Inspector, Salem, Iowa.

The second annual convention of the Iowa Bee-Keepers' Association brought together over one hundred bee-keepers and their friends, and a more enthusiastic bunch you never saw. We were also very highly favored by having with us the editor of the *American Bee Journal*, Mr. C. P. Dadant, of Hamilton, Ill., who gave a very able address on the subject: "Bee-Keeping in Europe." Mr. H. H. Root, of Medina, Ohio, was also present and gave a very interesting talk on the subject: "Modern Methods of Caring for Extracted Honey."

Mr. Root gave an interesting demonstration with the power extractor.

Mr. Frank C. Pettitt was elected delegate to the National Convention, and Dr. A. F. Bonney, alternate delegate.

* * * *

The second annual Iowa Bee-Keepers' Convention was said to have been the largest—not only in interest, but also in attendance—of any bee convention east of the Rocky Mountains and west of Detroit. One thing was very noticeable in that there were so many new faces. Several new members were added to the organization.

The convention took a vote to try to place honey on every table in Iowa for the Xmas dinner. A systematic plan of advertising was started, and the Association proposes to send printed cards or notices of honey for sale to be placed in store windows the week before Xmas.

Some remarkable yields of honey were reported. I think the best report I heard was from Mr. M. D. Johnson, of Webster, who reported over 1,500 lbs. from six colonies, spring count. His report, with many other very favorable reports from different parts of the state, go to show that Iowa is coming to the front as a honey-producing state.

* * * *

It will be impossible to tell all the good things enjoyed by those in attendance in these notes, but we certainly all felt it was good to be there, and look forward with eager interest and anticipation to our next annual gathering, which will be at Ames. The time is not set when this meeting shall be, but it is hoped to have the convention at such time as will assure the attendance of the largest number possible.

* * * *

One thing was brought out in the discussions on bee diseases which we believe will be of special value to every one concerned. Mr. E. G. Brown, of Sergeant Bluff, spoke of a plan he had tried and which had proven successful. Take one of the frames out of a prepared hive for a shaken foul brood swarm and insert a dry comb in

place of the frame in the starter, and let the bees remain in this hive long enough to empty the honey they had carried with them from the diseased hive, then draw out this comb of honey and brush the bees from it in front of the hive, being very careful not to scatter any of the honey, and destroy the comb, replacing it with frame with starter, and there will not be any of the old diseased honey left with the bees by the time comb has been built containing brood to feed the larvae.

* * * *

On Thursday morning occurred the election of the following officers for the ensuing year: President, Frank C. Pettitt, Atlantic; Vice-President, J. W. Stine, Salem; Secretary, S. W. Snyder, Center Point; Treasurer, C. H. Tome, Edgewood; Directors, Dr. A. F. Bonney, Buck Grove; Hamlin B. Miller and E. C. Wheeler, of Marshalltown.

Field Notes From Tennessee.

J. M. BUCHANAN, Franklin, Tenn.

We have had uniform success with the fasting method of direct introducing for four or five years, and shall continue its use until we find something better. The queen is kept in a cage, alone and without food, for about forty-five minutes, and then run in with very little smoke, usually at the top of the hive. We have tried the Miller smoke method to some extent the past summer, but fail to see any decided advantage over the other. We have noticed some reports of queens being lost or superseded after being smoked in. However, I don't think the smoke is to blame, for as much or more smoke is often used in ordinary manipulations.

* * * *

Dr. Miller and J. L. Byer favor strong colonies at all times, and Doolittle only wants them strong "just at the right time." Well, after all, it is a matter of "locality," and the time and duration of the honey flows. For a short, sharp flow, and nothing doing the rest of the summer, Doolittle would be right. But with our long continued and intermittent flows, sometimes lasting all summer, I have yet to see a colony too strong at any time, provided I had supers enough to give them room for all to get into the hive.

* * * *

We find mouse-proof entrance blocks a great convenience. They are easily made, and cheap, costing less than half a cent each. Cut pieces of lath to reach the full length of the entrance, and make a notch on the lower edge the size wanted for the winter entrance: (we make it one-half by six inches). Now tack a strip of three-

eighths inch mesh wire screen over the notch, and fasten the block to the hive with two small nails. I have seen many good combs ruined by mice where the entrance was left open during the winter.

* * * *

Attend the meetings of your Bee-keepers' Association. Take a hand in the proceedings; if you know anything good, tell it. You will be sure to get some good from the other fellow. Don't think you know it all. Don't stay away on account of the cost, for if you keep your eyes and ears open you will get your money back, and then some. And whether you attend the meeting or not, make it a point to see the Secretary, and hand him, or send him, your dues, for the Association cannot live entirely on hot air, although that idea seems to be somewhat prevalent.

Carrollton, Ga., December 12, 1913.

BEE-KEEPERS' REVIEW: I see your suggestion about contributions to pay off the indebtedness of the REVIEW. Let me suggest that all subscribers pay their subscriptions two years in advance and thus furnish the money to take up the indebtedness. If it is a paying institution, it seems to me this ought to pay the debt and with the advertising run the business for two years, when it would be out of debt.

Another thing: I see the *American Bee Journal* honors Langstroth and itself by carrying his picture in a conspicuous place. Why not the REVIEW do likewise by placing Hutchinson's picture on the front inside page, where you have plenty of room; or, at least, putting his name on that page like this: Established 1888, by W. Z. Hutchinson.

Enclosed please find my check for \$2.00 to pay my subscription two years. My time expires, I understand, with this month (December).

Yours truly,

L. K. SMITH.

[Friend Smith: Your kind letter is received and we are going to publish it in the January number of the REVIEW. In the first place we want to thank you for your suggestion and liberal patronage. We had thought along the line that you suggest about selling subscriptions in advance to pay off the REVIEW debt, but as it would be a burden on the REVIEW in the future, as you will readily see when it is considered that this outlined plan would only stave off the debt a year, *but not pay it*, we decided that the better way would be to ask our subscribers to contribute what they feel able, and not *mortgage the REVIEW* by selling subscriptions so far in advance when we need all the fees obtained each year to pay current expenses. If your plan was feasible we would not have to ask for subscriptions to the REVIEW

in advance, for we have over three years yet to pay off the debt, and all we would have to do would be to simply use the advertising fund for current expenses and use the present subscription fee and pay off the debt. The fact of the case is, it takes all of both advertising and subscription fees, also the small commission we get on the sale of tin containers, etc., to pay current expenses. You will be gratified when looking on the first page of this number to see that we have followed your and about a dozen other suggestions, and have incorporated the following: Founded in 1888 by the late W. Z. Hutchinson.

This is but a small tribute to the founder of the REVIEW, and we take pleasure in incorporating it.—Ed.]

New Superintendent of the Apiary, Mr. John L. Byard, Appointed at the Massachusetts Agricultural College, Amherst.

Mr. John L. Byard, who has since the enactment of the apiary inspection law served as a deputy inspector, is now superintendent of the apiary at the Massachusetts Agricultural College. The interest in bee-keeping and the demands of the bee-keepers are increasing and so insistent that it has become necessary to maintain a larger number of colonies in order to meet the requirements. Mr. Byard comes to the college as a man of long experience, having begun his work with bees as a boy in Vermont with his father, a veteran bee-keeper and bee-hunter. He has a wide acquaintance through his inspection work and as president of bee-keepers' societies in the state. Mr. Byard's services will be confined largely to the maintenance of the apiary and its equipment. He will also assist in laboratory and demonstrational work with students and at conventions.

DR. BURTON N. GATES,

Amherst, Mass., Sept. 6, 1913.

Asst. Prof. of Bee-Keeping.

Hamilton, Ill., Nov. 5th, 1913.

Editor REVIEW—I returned home on the 21st, but have hardly got the run of things yet, for a mass of correspondence has accumulated in my absence. We had a fine time over there and a cool summer while our people were suffering here from excessive heat.

We were as glad to return home as we had been to make the trip, and upon our arrival we found all our children and grandchildren at the station. It was about as much of a treat as the banquets which were offered to us across the sea by the bee-keepers who welcomed us.

I want to congratulate you on the appearance of the REVIEW. It is about as fine as it is possible to make it on as limited allowances as are at your disposal. You are certainly devoted to the cause.

Yours as ever,

C. P. DADANT.

A Few Notes on Bee-Keeping.

By C. L. GRIGGSBY.

I HAD an apiary of sixteen colonies for three years, 1875-76-77, at the termination of which I moved from Tennessee to California, but had no more bees till 1906, when my real bee-keeping experience began. I purchased an apiary of one hundred and eight colonies and again engaged in my favorite of all occupations. I thought at the time that my past experience was fully sufficient to enable me to manipulate an apiary of that size with ease.

I got along fairly well, but soon discovered that there was much ahead yet to learn, and after these few years I am still learning. Have fully regained my health, and am frank to say that my free outdoor life, made up of fruit-culture and apiculture, has been the sole cause of physical reconstruction. I am happy in my choice of occupations, and expect to keep more bees, keep better bees, and keep bees better, as long as I am able to superintend them.

In 1910 the honey crop was a practical failure in this section, and my output was about twelve hundred pounds from something more than a hundred colonies, spring count. This I sold on the local market from eight to ten cents per pound. With the exception of that year I have done from fairly well to real well all the way through, always getting a real good price for my honey, also for my wax.

I always make it a point to keep my apiary in first-class condition, and advocate the free use of the paint brush. I am never ashamed, but rather delighted, to go out with friends and visiting apiarists and show them my apiary.

I never allow any natural swarming in my apiary. While I feel that it adds a delightful feature to the poetry of rural economy, on the other hand I consider it a nuisance to progressive and up-to-date apiculture. I do my dividing as soon as the main honey flow is over, so as to give them ample time to build themselves up to good strong colonies before winter begins (of which we have very little in this section), and often get quite a little surplus honey from the new colonies between the dividing time and the beginning of winter. I now have them built up to two hundred colonies, and expect to double them again. When the present location becomes overstocked I will establish an outyard within the borders of the Redlands orange groves, so as to get the advantage of the orange nectar.

I advocate breeding for the best strain with two main objects in view, docility and the honey-gathering disposition. I occasionally buy a queen, but am now testing a plan that I believe is a good one. By the use of the cabinet-card system, during extracting time, each colony that gives me an unusual yield is written up as such on the card that corresponds in number with the number on that particular

hive. This plan is carried out throughout the entire apiary. This past season throughout the three extractings (with the exception of one colony that became queenless) every colony that made a good footing the first extracting did the second, and also the third. Some of those that made a poor footing the first came out as A No. 1 in the second and third.

Why? Because they were weak in the spring, and had to have time to build up.

The greater number of these colonies that made a partial failure, so far as appearances went, were as populous and seemed as good rustlers as those that gave good yields. But they did not get the honey! And it cost just as much to care for them as for the best.

I went up into the mountain a reasonable distance from my apiary, cleaned away the brush, graded the plat down, and established a queen-nursery of forty colonies, ten framed size. I soon had forty beautiful laying queens, all from well selected brood from the A No. 1 colonies. I began removing objectionable queens and replacing them with these new ones. The colonies deprived of their queens in the nursery would proceed at once to rear another. As soon as six days expire I go to one of the A No. 1's in the main apiary and draw a frame of brood, and after removing all queen cells from the combs in the colony so deprived of their queen in the nursery, I give them the new brood and leave them to rear a better queen. I see the newly introduced queen is accepted and well on the road to business. One of the important steps is to register on the front of the hive on a metal plate, also on the corresponding card in the cabinet, as nearly as possible the date of the queen's hatching. This enables me to know when to supersede the old queen with a young one.

Mendelism and the Breeding of Bees

By G. W. BULLAMORE, F. R. M. S.

Albury, Much Hadham, Herts.

DIAGRAMS are occasionally given which show that, according to Mendelian laws of inheritance, crosses between the black and the Italian race of bees will eventually revert to one or other of the original parent races. These diagrams may be correctly drawn, yet when we go more deeply into the views of Mendel we find that a diagram may mislead us as to what actually happens.

When we deal with a single pair of characters it is quite true that the descendants revert to one or the other original parental types, but it by no means follows that the possession of this parental character ensures the possession of all the other characteristics of the original stock. Mendel sets this forth very fully when discussing

the transmission of three pairs of characters. Here he shows that these characters are inherited in 27 different ways and that in a series of 64 individuals all these twenty-seven types occur. But only eight of these types breed true and of these, four are of each color. Each of the parental types will occur once in the series of 64. The parental colors occur in the proportion of three to one throughout the series.

When we cross two races, however, we have no means of ascertaining how many pairs of Mendelian characters are involved, and the higher the number dealt with the more complicated does the matter become. If we assume that there are ten pairs of essential characters concerned when we cross the black with the Italian bee, then according to Mendel we get the following startling results:

To get the full number of combinations of characters it is necessary to take a series of 1,048,576 individuals. The colors will reappear in such a series in the proportion of three to one, according to which color is dominant. One individual of the series will possess the ten original characters of the Italian bee and one of the black. Mongrels, which breed true, will be represented by 1,022 individuals and each will be of a different type. The remaining individuals of the series will be unstable mongrels, of 58,025 types.

But by increasing the characters under consideration to fifteen pairs, we would expect the original parental types to reappear but once each in a series of over 1,000,000,000 individuals; 32,000 permanent types of mongrel would appear and the remaining individuals of the series would be unstable.

As hybrid drones would not be produced until the second generation, the extra infusion of black or Italian blood from the drones of the first generation would somewhat complicate the matter. Nevertheless the mongrel types which may become permanent are so great that the reappearance of all the original characters of one of the parents in any queen subsequently raised is outside the limits of profitable speculation.

EDITORIAL CORNER

February 17-18-19—at St. Louis.

Next month a full program of the big St. Louis Convention will appear in the REVIEW. Watch for it.

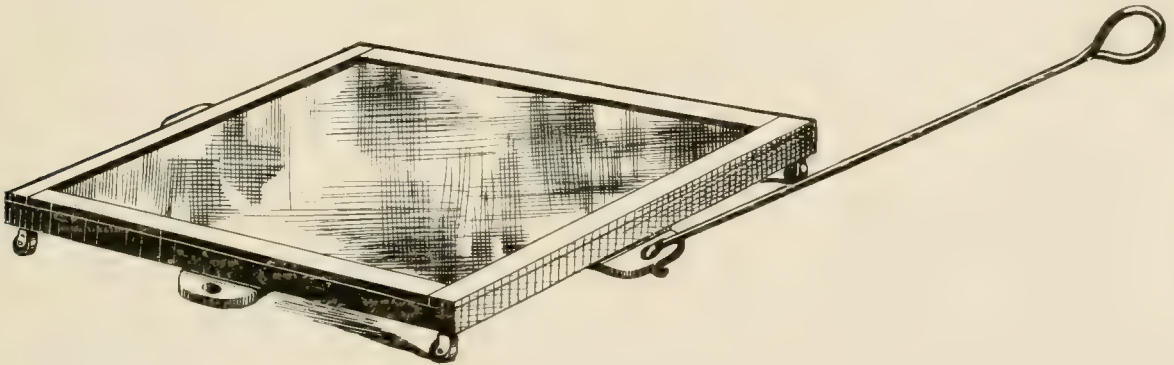
President Gates is arranging with specialists in the different lines of bee-keeping to furnish material for the program of the National at St. Louis. You should not miss these talks as they will be valuable in your business in the future. You are invited to attend.

The Whole Storeroom on Wheels.

Large manufacturers are equipping their storerooms with platforms on wheels. Stock is piled on these low platform trucks so that any stockroom boy can easily move stock of heavy weight to any place in the factory without lifting. This is a valuable idea for bee men. Cement floors in the honey houses are becoming more common, so that a platform on low wheels could easily be pushed or pulled from one place to another with little effort.

Supers both empty and full could be piled on these and they would do away with most of the lifting.

The wheels should be strong and not over three inches in diameter. The platform should be made such that any drip would fall on the tin top of the truck and be kept free from contact with the supers. The truck platform here illustrated is but a suggestion.—W. F.



Storeroom Platform Truck

To hold two files of supers, catch the drip and save much lifting

February 17-18-19 are days that will be remembered as great convention days at St. Louis.

The Michigan Branch of the National Association held their annual meeting in the Y. M. C. A. Building, Detroit, December 10-11, as per schedule. The meeting was not largely attended, there being less than one hundred present at the different sessions. We consoled ourselves with the thought that while the attendance was small, it was of excellent quality, as several very important subjects were well handled by those on the program. The members were so well pleased with the management that the old officers were all unanimously re-elected for the ensuing year. President Morce was elected delegate to the national convention. The next place of meeting will be Lansing, which is centrally located and in reach of many convention attendants. The date on which the convention will be held was wisely left with the executive committee. We will have more to say about this important convention in the February REVIEW.

This is the season when good resolutions are made for the coming year. Let us as honey producers resolve to keep bees better, and produce more and better honey during the season of 1914 than during 1913. Now is the opportune time to make plans for the season's work. Now is the time to decide upon how much increase we will make next Summer, and provide hives and equipment for them before the busy season approaches. If we expect to produce better honey than heretofore, enough upper stories of extracting frames filled with full sheets of foundation should be provided to hold our entire crop of extracted honey. If you produce comb honey, even more of the supplies should be set up during the leisure of Winter, before the honey season is on.

Our period of doing shop work, such as setting up hives and supers, is during the months of February and March. We try to have everything ready for the paint by April first. We do no painting during freezing winter, but do most of this during the months of April and May. Foundation can be put into sections during Winter, but we prefer to wait until warm weather before putting our foundation into our brood and extracting frames.

The Central Packing House Selling Honey Direct to Consumer.

A member was in St. Louis, Mo., in November, with a car of honey for sale. As it happened, through our own individual and National advertising three calls for honey came to this office from this point during the week the member was there selling his honey. Those three inquiries were turned over to this member to make sales to as best he could.

This only illustrates in a small way what would be possible for the National to do by having a packing house in the large centers, say one in each state, where members' honey could be sent, properly graded so the customer would be sure of getting good goods and correct weights, and with the National guarantee of purity behind it customers would, without a doubt, have confidence to buy. This is an opportune time to launch such a project, and but little advertising would be necessary, for nearly all periodicals are crying "high cost of living," "buy direct from the producer," etc.

Extracted honey by parcel post, in screw-cap syrup cans, cased in double corrugated paper carriers, as introduced by the National Association, have proven a success, so now honey can be delivered 150 miles to our customers at a very nominal expense, being but 18c per gallon can of 12 pounds, or only one and a half cents a pound, which makes this system of selling practical. The postal department will deliver the honey to the door of your customer, collect the pay and return your money, less 3 cents, the fee for the money order they return you. One could hardly ask more.

The scheme would be to establish a few packing centers to start with and advertise locally in papers that circulate mostly in the 150-mile mailing zone. If the scheme paid out on a small scale, establish more selling centers until the entire United States is well dotted with National packing and selling agencies, when a nation-wide advertising campaign should begin.

With a system of proper distribution and conservative advertising, two or three times as much honey should be consumed in the United States as at present, thus increasing the price materially to the producer, and placing our honey into the hands of the consumer at a less price than they are paying today.

The consumer should and, I think, would have implicit confidence in an association of producers who sell their product direct to them. "Direct from the producer to the consumer" should be our slogan.

If you have never attended a National Convention, make a start at this time and attend the big National at St. Louis, February 17-18-19. You will be well pleased with the results.

Oct. 14, 1913.

Editor REVIEW—The honey crop here is best in years; no dark honey. Got 725 lbs. comb honey from eleven colonies, spring count, three new swarms. Honey sells for 15 cents and moves slow on account of heavy peach crop. Last year it sold from 15 to 20 cents; no disease here.

PAUL HEISE,
Warsaw, Ill.

Forestville, N. Y.

I started in this spring with 72 colonies and increased to 102 colonies, and took off 8,530 pounds of comb and extracted honey, besides saving about 500 pounds in combs for feeding to colonies in the spring when short of stores. I have been keeping bees about eighteen years, starting by catching a runaway swarm. I was afraid of bees then and if you could have seen me rig up to hive my first swarm I think you would have laughed some. I wish I had a picture of the scene. I practiced Doolittle's plan of shook swarming and only had eight colonies swarm in the yard this summer. These were the ones that I didn't give the treatment.

A. J. BLACK,

Vinegar Made from the Washings of Cappings.

Editor REVIEW: I presume it is well known among bee-keepers that one can use the washings from cappings for vinegar. When the cappings were thoroughly drained of their honey, father poured water over them and allowed them to stand in the water for some time, then strained the sweet water again and this sweetened water he put into barrels, adding some clear water, perhaps. After a time we had the finest vinegar that sold for 20c per gallon. Many people consider it far superior to cider vinegar, and was no doubt far more healthful.

I certainly wish you had known my father, but it seems that no large bee-keeper ever came our way. It was always my ambition to have father tell his experiences in conventions or write for the journals, but he seldom did either. I coaxed him to write the article he did for the REVIEW. An article he once wrote was turned down and that discouraged him somewhat. I presume. He was a noble man, a Prohibitionist, a Christian who loved peace. If I can be of any further service to you, write me.

OLIVE MILLER,
Beaverton, Mich.

Let the St. Louis trip be your 1914 outing. Could you conceive of a more enjoyable trip?

Memphis, Tenn., Dec. 8, 1913.

Editor REVIEW—Enclosed find money order for two dollars. I have never seen the plant or office where the REVIEW is printed, and don't know that I would be a competent judge of its worth if I did, but I do think the REVIEW is worth all it costs and more, and note in the December issue that you wish to pay for the remaining debts on it by donation, so am sending one dollar subscription and one dollar donation to the paying fund. I also notice according to your statement that if each member would donate fifty cents we would more than own the REVIEW. I am not much of a bee-keeper; have 18 colonies, and don't get time to do them justice. Hope to do better soon and am not rushing into the business as I have partly gotten over my first bee fever and know a few things about the business now that take the place of lots of the first ideas, and have dampened some of my first ambitions considerably. I did fairly well, I think, this season. Took about 800 lbs. extract from not more than eight colonies. My bees did not winter well and I only counted on four colonies in early spring, but it was an extra good season up until August, when we had a drouth that lasted nearly until October. But I must not take up your good time with my little affairs. Hoping that you get many donations to pay for the REVIEW, and wishing you and all concerned with the REVIEW a happy and prosperous new year, I remain,

Yours truly,

B. F. MILLER.

[Friend Miller: We thank you for the donation of the dollar; also your kind words in regard to the REVIEW. Yes, if each subscriber should decide to send in but 50c each, as you suggest, we would be more than out of debt. Wouldn't it be great, though, if we could by subscription, pay off say \$300 this winter! If this could be done, with more than two winters ahead before our contract expires, we would then be very sure that we would not lose the REVIEW by default. Did I say lose it! *We will not lose it*, take my word for it.—Ed.]

Coming Conventions.

Hampshire, Hampden-Franklin. February
Tennessee. Some time in January
Worcester County.
..... Date and place not decided
National, St. Louis. February 17-18, 1914
Washington State. . . . January 7-8, 1914

Augusta, Wis., Sept. 8, 1913.

BEE-KEEPERS' REVIEW:

Just got home last evening from the Minnesota Fair. The Educational Exhibit for placing honey before the public was assuredly a big success. At no time was any of the space around this exhibit left vacant; it was crowded all of the time, and some very good talks were made on honey and the method of raising and extracting by a few of the most loyal ones.

Reverend Francis Jager of St. Bonifacius, Minn., had charge of the demonstration and in all 12,000 pounds of white honey were extracted. The demonstration included uncapping with steam knives, extracting, elevating the honey with rotary pump to strainer and then to storage tanks, bottling, filling pails and cans, and melting the cappings.

The Fair Association contributed \$300 to the cause and Rev. Jager contributed his work and an additional amount which will be larger than the donation of the Association. It sure was no small affair. Free wafers and honey were served to all at the demonstration, and it kept one person busy all of the time passing out the sweets.

The whole demonstration and displays in the Agriculture building were fine. I honestly believe the building received its share of the patronage of the entire fair, and Scott LaMont, the superintendent of the apiary exhibits, has done all he can to make the building a success.

F. M. DITTMER.

Goodman, Wis., Dec. 2nd, 1913.

Editor REVIEW—Fifty-one colonies stored 8,665 pounds in 28 days for me this season. (Foot note of letter received from Mr. E. Woodall, Goodman, Wis., under above date.—Ed.)

Those who expect to attend the big St. Louis Convention kindly write this office immediately, so we can list you as one of the progressive members who will attend. This in the February REVIEW.

NATIONAL GRADING RULES

Adopted at Cincinnati, Feb. 13, 1913.

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these three respects that any section shall be representative of the contents of the case.

I. FINISH:

1. *Extra Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. *Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. *No. 1*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. *No. 2*—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. *Heavy*—No section designated as heavy to weigh less than fourteen ounces.

2. *Medium*—No section designated as medium to weigh less than twelve ounces.

3. *Light*—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched up sections; sections weighing less than ten ounces.

KANSAS CITY—The honey market shows rather a weak feeling. The receipts of comb are large. The supply of extracted is not large; demand just fair. The weather is warm, and this accounts some for the light demand. We quote as follows: No. 1 white comb, 24-section cases, \$2.75; No. 2 white comb, 24-section cases, \$2.50; No. 1 amber comb, 24-section cases, \$2.60 to \$2.75; No. 2 amber comb, 24-section cases, \$2.50; white extracted, per pound, 8c to 8½c; amber extracted, per pound, 7c to 8c; beeswax, per pound, 25c to 30c.

Yours very truly,

C. C. CLEMONS PRODUCE CO.

Dec. 13.

LOS ANGELES.—While the production of extracted and comb honey in sage honey districts of California was a failure this year, practically the usual amount of alfalfa, light amber and amber honey has been obtainable. The bordering states have taken advantage of the situation in California, and have filled the coast markets with alfalfa and sweet clover white honey, both comb and extracted, to such an extent that the market is quite dull at present.

The market on alfalfa light amber and amber honey stands at 5¾ to 6 cents, and the fancy white alfalfa or sweet clover is worth about 6¼ to 6½c all f. o. b. original shipping points.

There is no comb honey in California, excepting that which is shipped in from other

western states, most of which has been sold on a basis of about \$3.00 for fancy, f. o. b. original shipping point.

Yours very truly,

Nov. 10th. HAMILTON & MENDERSON.

DENVER.—Our local market is well supplied with honey and our jobbing quotations are as follows: Strictly No. 1 white, per case of 24 sections, \$2.70; choice, \$2.57; No. 2, \$2.43; extracted white, 8-9c; light amber, 7-7½c.

We are in the market for beeswax and pay 30c per lb. in cash and 32c in trade, delivered here.

Very truly yours,

THE COLORADO HONEY PRODUCERS' ASSN.

Nov. 20.

F. Rauchfuss, Mgr.

CHICAGO—There has come over the market the usual depression that comes after the retail trade has stocked up for the holidays, hence prices are weak, especially comb honey. Prices have receded from one to two cents from those quoted in last issue. Extracted while weak is not one cent per pound lower, as the well ripened, good flavored is practically unchanged. Beeswax is selling on arrival at 31c to 33c.

Yours respectfully,

R. A. BURNETT & CO.

Dec. 12.

National Members Having Honey for Sale.

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ills.
A. J. Diebold, Seneca, Ill.
Wm. Marshall, Carpentersville, Ill.
W. T. Sherman, Elkhorn, Wis.
G. M. Withrow, Mechanicsburg, Ill.
Hassemint—Cotton Blend

Wilmon Newell, College Station, Tex.

Alfalfa

W. A. Martin, Lander, Wyoming.
Chas. H. Hanney, Lander, Wyo.
O. L. Malmgren, Centerfield, Utah.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
J. C. Mathews, Montrose, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association,
Idaho Falls, Idaho.
Arizon Honey Exchange, Tampe, Arizona.

Raspberry

C. F. Smith, Cheboygan, Mich.
Geo. H. Kirkpatrick, Rapid City, Mich.
F. D. Stephens, Box 383, West Branch, Mich.

Amber

G. Frank Pease, Marshall, Mich.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKee, Velasco, Texas.
L. O. Brainard, Lone Rock, Wis.
E. D. Townsend & Sons, Northstar, Mich.
Ira D. Bartlett, East Jordan, Mich.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Guirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.

Frank Kittenger, Rt. 11, Franksville, Wis.

Clover and Basswood blend

Elias Fox, Union Center, Wis.
Dr. C. G. Luft, Fremont, Ohio.
Frank Kittinger, Caledonia, Wis.

White Clover

F. X. Arnold, Deer Plains, Ill.
E. E. Townsend, Fort Dodge, Iowa.
Ed Wilson, Whittemore, Mich.
Byron S. Hastings, Rt. 5, Brookville, Ind.

A. H. Guernsey, Ionia, Mich.
E. H. Canfield, Carson City, Mich.
John G. Wagner, Elkader, Iowa.
S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
A. S. Tedman, Weston, Mich.
John Finzel, Gladwin, Mich.
Orville Safford, Fort Edwards, N. Y.
G. M. Brewer, Medina, N. Y.
W. P. Turner, Peoria Heights, Ill.
C. J. Oldenberg, Belle Plains, Minn.
Floyd Markham, Ypsilanti, Mich.
J. H. Allemier, Delphos, Ohio.
John Olson, Davis, Ill.

F. C. Hutchins, Santa Clara, N. Y.
Dr. C. G. Luft & Son, Fremont, Ohio.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, La Mars, Iowa.
Frank Snyder, Anamosa, Iowa.
A. S. Crotzer, Lena, Ill.
Rev. F. Schedtler, Rt. 7, Sumner, Iowa.
Geo. A. Hyde, New Canton, Ill.
W. H. Pearson, Mitchellville, Iowa.
John S. Coe, Boyce, Va.
M. H. Lind, Baders, Ill.
Arthur Thayer, Rt. 2, Freeland, Mich.
N. L. Stevens, Rt. 19, Venice Center, N. Y.

Frank Kittinger, Caledonia, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prisk, Mineral Point, Wis.
Wm. Fox, Withee, Wis.
R. V. Langdon, Rt. 5, Baraboo, Wis.
C. J. Freeman, Bagnall, Mich.
Quirin-The-Queen-Breeder, Bellevue, O

C. F. Smith, Cheboygan, Mich.
 Niels A. Nelson, Dike Iowa.
 Geo. E. Capwell, Cottonwood Falls,
 Kansas.
 Chas. Soames, Peru, Ind.
 L. O. Brainard, Lone Rock, Wis.
 Jay S. Kendall, Chemung, Ill. ,
 A. H. Fralick, Homer, Minn.
 Joseph Kurth, Mineral Point, Wis.

Mangrove, White as Clover

A. F. Brown, Hawks Park, Fla.

Partridge Pea
 J. J. Wilder, Cordale, Ga.
Buckwheat
 Jas. McNeill, Hudson, N. Y.
 J. A. Janssen, Rt. 4, Charlevoix, Mich.
 E. A. Duax, Chippewa Falls, Wis.
 Ira D. Bartlett, East Jordan, Mich.
 N. L. Stevens, Rt. 18, Maravia, N. Y.
 Wilmer Clarke, Easleyville, N. Y.
Mesquite.
 Arizona Honey Exchange, Tampe, Ari-
 zona.

The National Bee-Keepers' Association And its Affiliated Associations

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Leicester, Mass.

The Wisconsin State Bee-Keepers' Association will meet in annual convention at the Capitol building, Madison, Wis., February 3d and 4th, beginning at 10 a. m., Tuesday.

Headquarters for bee-keepers will be at Simons' Hotel. We are preparing an interesting program and looking for a large attendance.

GUS DITTMER, Secretary.

The Washington State Bee-Keepers' Association will hold their twentieth annual convention in the farmers' room in the Court House, in North Yakima, on Wednesday and Thursday, January 7-8, 1914. A good program is promised, and a surprise is in store for all who attend. A banquet will be served on Thursday. All bee-keepers are urged to be with us whether members of the association or not.

J. M. RAMAGE, Sec.

Meet those you have read of so long, but have never seen, at St. Louis February 17-18-19. You will not regret it!

Editor REVIEW:

The Tennessee Bee-Keepers' Association will hold its annual meeting at Nashville, Tenn., on January 30 next. The program cannot be given complete at this time, but will be full of good things, and a full attendance of the membership is desired. The railroads will give round-trip rates from any point in the state to Nashville on that date.

J. M. BUCHANAN, Secretary,
Franklin, Tenn.

THE BEE-KEEPERS' REVIEW.—The thirty-third annual convention of the Colorado State Bee-Keepers' Association will be held at the Auditorium Hotel, Fourteenth and State streets, Denver, Col., Tuesday and Wednesday, January 20 and 21, 1914. This is the week of the Live Stock show and half rates will be in effect. Come and attend the convention and then take in the stock show. A good program is being arranged and some interesting exhibits will be shown.

WESLEY FOSTER, Secretary.

Convention of State Bee-Keepers' Association, Utah Agricultural College, Jan. 30, 1914.

Jan. 30, 10 a. m.—Enrollment, faculty room; call to order, room 126; president's address, E. B. Hawkins, American Fork; appointment of committees; report of secretary, H. C. Henager, Salt Lake.

11 a. m.—"Rearing and Introducing of Queens," R. T. Rheese, Ogden; "Production and Sale of Honey," Wilford Belliston, Nephi.

2 p. m.—"Foul Brood Treatment," James Hacking, Vernal; "Wintering," summer stand, cellar, N. E. Miller, Logan; "Middle Man and Sale of Honey," A. G. Anderson, Beaver.

8 p. m.—Music, School of Music, U. A. C.; "Life of the Honey Bee" (lantern slides), Dr. E. G. Titus, U. A. C.; reports of committees and election of officers.

An exhibit of bees and bee-keeping appliances will be open to the bee-keepers and other visiting farmers and housewives in the College Museum.

Important Meetings for Bee-Keepers.

Farmers' Round-Up and Housekeepers Conference, Jan. 26 to Feb. 7. State Poultrymen's Convention, Jan. 29-31. State Poultry Show, Jan. 26-31. State Dry-Farmers' Convention, Jan. 31. State Dairymen's Convention, Feb. 2. Utah Development League in January.

The Review Debt Subscription List.

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we *must have* many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

E. D. Townsend & Sons, Northstar, Mich.....	\$10.00
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Mr. N. E. Miller, 439 S. Main St., Logan, Utah.....	1.00
Rev. J. W. Stine, Salem, Iowa.....	1.00

We hope to include many more donations before the February REVIEW goes to press. Let them come along. You will not miss so small an amount. We have \$42 interest due January 1, then contributions will apply on the principal.

Address, with remittance, THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

Editor REVIEW: Please take out my advertisement in the REVIEW. Have sold all honey at a fair price and most of it through the REVIEW. Thanks for the favor.

T. W. LUEBECK, KNOX, Ind.

Pioneer, Mich., Dec. 9, 1913.

MR. E. D. TOWNSEND:

Dear Sir: Yours of the 6th at hand. There are quite a number of bee-keepers who are conveniently located to attend a convention at Fife Lake. There are good hotel accommodations there, and I suppose there must be a lodge room of some kind that could be secured to hold the meeting in. I believe if the matter was worked up, there might be a good meeting held there.

Our bees are reasonably quiet; they have been in the cellars now nearly a month. By giving them lots of fresh air we have kept them quiet, although the temperature in the cellars has been above 50 degrees the most of the time. If I can keep the air pure, fresh and dry all the time in the cellar, I am not

as particular about where the temperature stands as I once was, so long as it keeps between 32 and 60 degrees.

ELMER HUTCHINSON.

Two deaths occurred during October that were reported at this office. Mr. J. J. Miller, Tunkhannock, Pa., died on the 17th of October, and Mr. A. A. Ludington, Verona Mills, Mich., died on the 20th of the same month. Mr. Ludington was a familiar figure at our state conventions for years. For several seasons Mr. Ludington used to sell out his honey before we did, then he would send us the orders he would get for us to fill. How many bee-keepers are there who, when they are sold out of honey, try and help some neighbor to dispose of his, as did Mr. Ludington? He was an example worthy of following. Mr. Ludington's house-apiaries have been shown in the back numbers of the REVIEW as the older readers will remember. Some reader may be able to tell us more of Mr. Miller, as a bee-keeper and neighbor.

St. Louis is near the great honey-producing center of the West. A big "turn-out" is assured.

Said Emerson: "Write it in your heart that every day is the best day in the year."

The man you meet for the first time puts you down as a good or an evil influence. Make a wholesome impression.

Atascosa, Texas, Nov. 17, 1913.

Mr. Townsend—I appreciate very much the present you have given me. It will give me special pleasure to read the REVIEW and feel that it was given me by a friend. Many good wishes for the success of the REVIEW and the National.

Yours very truly,
L. W. AVANT.

Chase, Mich., July 21, 1913.

MR. E. D. TOWNSEND,
Northstar, Mich.

Dear Sir: I am mailing you a sample of extracted honey. What do you think such honey should be worth this year? I got 8c per lb. on a two-ton lot in 1911, delivered at my station.

I will have 4,000 lbs. to sell by Aug. 15. It is put up in 60-lb. cans.

Yours truly,
FRANK MURRAY.

FRIEND MURRAY: We are selling our best White Clover extracted honey at from 9c to 10c per pound, f. o. b. our station, this year, the difference in price being mainly in the quantity ordered at a time. You had ought to be able to get this price for yours if you would let people know you have it; then, after letting them know, tell your customer that you are selling for 9½10c in the small way, but in ton lots you will take 9 cents. Those who do not ask more for their honey will continue to sell at the small price of 8c for best grades, but the up-to-date fellow who will do a little "hustling" can easily get the larger price and thus make it easier for his neighbor to get good prices. Selling near home at say 15c at retail all you cannot get 10c for at wholesale will solve your selling problem. I realize that there are some few locations,

principally in the West, where this advice cannot be carried out, but generally speaking it is feasible.

When sending in your renewal for the REVIEW, kindly ask your neighbor bee-keeper to subscribe with you.

Those wanting to try those gallon packages to mail direct to their customers should order them early, as we anticipate a large demand for them. Shipped from Detroit, Mich., at \$11.00 per 100, crated, 50 in a crate, to go by freight. Address

NATIONAL BEE-KEEPERS' ASSN.,
Northstar, Mich.

"The REVIEW is extra good; keep 'er goin'."—DR. CHRISTIAN G. LUFT, Fremont, Ohio, 8/21/13.

(Do not think you need fear, Doctor, that the REVIEW will be discontinued; that is, we have heard nothing to that effect at this office.—Ed.)

Classified Department.

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX.

FOR SALE.—Clover Comb and Extracted Honey. Address A. J. DIEBOLD, Seneca, Ill.

WANTED.—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th st., Philadelphia, Pa.

WANTED.—Comb, extracted honey and beeswax. R. A. BURNETT & Co., 173 So. Water St., Chicago.

FOR SALE.—5,000 lbs. extracted honey in 60-lb. cans; also 55 cases comb (mostly white clover). JOHN OLSON, Davis, Ill.

President Gates is leaving no "stone unturned" to make the St. Louis program the "strongest ever." You will miss a "treat" if you fail to attend.

We predict the "best ever" at St. Louis.

FOR SALE—Car of Alfalfa Comb Honey, put up in double tier shipping cases, 24 sections to the case. J. C. MATHEWS, Montrose, Colo., Box 176.

FOR SALE—Fine ripe raspberry and milkweed honey mixed. A fine blend in 60-pound cans. Price, 9c per pound. Sample, 5c. Address GEO. H. KIRKPATRICK, Rapid City, Mich.

EXTRACTED HONEY in 60-lb. cans. Three grades, good to very fine. A blend of white and sweet clover, at 8c to 9c and 10c per pound. Address A. MOTTAZ, Utica, Ill.

IDAHO FALLS, IDAHO—Comb honey all sold. We quote fancy white extracted in 60-lb. square tins at 7c. IDAHO HONEY PRODUCERS' ASSN., Idaho Falls, Idaho.

FOR SALE—15 tons Spanish Needle amber honey, good quality, in new 60-lb. cans. Write for price; state amount you want; sample, 10c. F. W. Leubeck, Route 2, Knox, Ind.

HONEY WANTED—Send your samples, prices, quantities and how put up and packed, to CHAS. ISRAEL & BROS., 486 Canal St., New York. Established in 1875.

WANTED, HONEY—Extracted and comb. Will buy or handle on commission. Will pay highest price for beeswax. HILDRETH & SEGELKEN, 265-267 Greenwich street, New York City.

FOR SALE—We have a car of Mesquite honey for sale at 6½c per pound, f. o. b. here. We also have two carloads of light amber alfalfa honey at 5½c, f. o. b. here. ARIZONA HONEY EXCHANGE, Tempe, Arizona.

FOR SALE—Choice, thick, well ripened extracted honey, of delicious flavor. Price \$12 per case of two 60-lb. cans. Write for prices when put up in 5 and 10-lb. pails. O. H. SCHMITT, Rt. No. 5, Bay City, Mich.

FOR SALE—White Clover Honey, none better. In 10 lb. pails, six in a case, at \$6.50 per case; 5 lb. pails, 12 in a case, at \$7.00 per case; ½ lb. glass jars, 24 in a case, at \$2.80 per case. Sample, 4c. HENRY STEWART, Prophetstown, Ill.

FOR SALE—Extra fine extracted clover honey. Have had no better in 25 years. Tiered up and well ripened before extracted. It is in new 60-lb. (net) square cans, two in a box. Price on request. DR. C. G. LUFT & SON, Fremont, Ohio.

HONEY FOR SALE—40 cases (two 60-lb. cans each). A blend of white and sweet clovers mostly and clovers and fall flowers. A very light amber, good quality; 9c and 8½c in large lots, 9½ and 9c four cases or less. ALFRED MOTTAZ, Utica, Ill.

20,000 LBS. HONEY FOR SALE—Buckwheat, goldenrod-aster blend, at \$8.40 per case. This is dark honey. Clover-milkweed-raspberry blend; good body, but little off in color and flavor, at \$9.00 per case. The above honey is all in new 60-pound cans and cases; 120-pound net per case. Sample on request. IRA D. BARTLETT, East Jordan, Mich.

BEEES AND QUEENS.

BEEES by the pound, without comb, \$1.25; ½ lb., 75c; queen, Italian, \$1.00. ROSEDALE APIARIES, Big Bend, La.

WANTED—To buy 50 to 100 colonies of bees. Would prefer in 8-frame L. hive. Address J. E. HEBERT, Bad Axe, Mich.

FOR SALE—Three-banded and Golden Italian queens and bees that are gentle, prolific and the best of honey getters. Also bees by the pound and half pound, and nuclei. Circular on request. L. & H. APIARIES, Clarkston, Mich.

WE REQUEEN OUR BEEES every year to prevent swarming. We offer the one-year-old queens removed from these hives at 50c each, \$5.40 per doz., \$40.00 per 100. Italian stock. Delivery guaranteed. Book orders now. SPENCER APIARIES Co., Nordhoff, Cal.

CARNIOLAN QUEENS—These queens are bred from the best imported strains. If any queens should be impurely mated we will replace them free of cost. Price, Untested, one, \$1.00; six, \$5.00; twelve, \$9.00. Tested, one, \$1.50; six, \$8.00; twelve, \$15.00. Address WM. KERNAN, Rt. 2, Dushore, Pa.

QUEENS bred from Moore's and Dolittle's best Italian stock. Untested, 75c each, \$8.00 per doz., \$60.00 per 100; tested, \$1.00 each, \$10.50 per doz., \$80.00 per 100. Delivery guaranteed. Book orders now. SPENCER APIARIES Co., Nordhoff, Cal.

FOR SALE—Carniolan Queens. These queens are bred from best imported strains. If any queens prove impurely mated we will replace them free of cost. Prices for balance of season: untested, one, 75c; six, \$4.25; twelve, \$8.00. Tested, one, \$1.00; six, \$5.50; twelve, \$10.00. Address all orders to WM. KERNAN, Rt. 2, Dushore, Pa.

THREE-BANDED Italian Queens and Bees. Untested queen, 75c each; six, \$4.25; twelve, \$8.00. Tested, \$1.25 each; six, \$7.00; twelve, \$12.00. For select queens add 25c each to the above prices. Nuclei without queens, 1-frame, \$1.50; 2-frame, \$2.50; 3-frame, \$3.00. 1 lb. Bees, \$1.50, ½ lb. \$1.00. Add price of queen wanted with bees. ROBERT B. SPICER, Whar-ton, N. J.

The Central West has not had a National Convention in some years. This should be a "bumper." All eyes are now turned toward St. Louis.

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

FOR SALE.—Six colonies of select Italian bees, in excellent condition, with young queens, at \$5.00 per swarm. The equipment is the modern Langstroth. Address R. F. L., account M. A. C., Amherst, Mass.

QUEENS by return mail. Tested, \$1.00 each; untested, 75c; \$7.00 per doz. Three-band Italians only. No disease, and satisfaction guaranteed. J. N. K. SHAW & Co., Loreanville, La. (Iberia, Pa.)

MISCELLANEOUS.

A NEW GOLD WATCH to exchange for extracted honey. LEO DOSCH, Miamisburg, O.

FOR SALE—Rufus-red Belgian Hares. Price list free. HARVEY L. STUMB, Richland Center, Pa.

FOR SALE.—Dutch, Silver, Flemish Giants and English Rabbits. Address JOHN WIGGLE, 289 23rd St., Detroit, Mich.

FOR SALE—Bee-Keepers' supplies, honey and bees. Write for price circular. A. E. BURDICK, Sunnyside, Wash.

I GOT 100 LBS. COMB HONEY per colony; my neighbors got none. I'll tell you how for 25c. BALDWIN, 456, Baxter, Kans.

FOR SALE.—A few trios of Buff Minorcas, extra good layers. Also want Hershisers Wax Press. CLYDE GODFREY, R. F. D. 9, Jonesville, Mich.

WANT TO SEND YOU our catalog and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. Co., Greenville, Tex.

FOR SALE.—Flemish Giants Rabbits, \$3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats, 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

FOR SALE.—Black and Tan, Blue and Tan Angora. English, Flemish Giants and Belgian Rabbits. Address FRED MILLER, 119 Brandon Ave., Detroit, Mich.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson, Mich.

FOR SALE—Root's Goods and Dadant's Foundation at factory prices, F. O. B. Pacific Coast points, in quantity lots; smaller lots in proportion. Write us stating your wants. SPENCER APIARIES Co., Nordhoff, Cal.

WANTED—"Review," April, 1910, and December, 1911; for sale or exchange, April, 1912. C. H. BOCK, Newmarket, England.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

A RARE OPPORTUNITY to start in the bee business, with the sale end of the business all worked out. It consists of four yards of bees; 140 colonies all told. One of those yards contain very carefully bred Carniolan bees and some very fine breeding queens of this race. A Carniolan trade that took 500 queens last summer. Two and a half acres land mostly set to small fruit; one horse, harness and wagon; one Overland automobile, model 40, with body to set on for carting bee fixtures to and from yards; one honey packing house 14x28 feet, with full equipment for packing honey in glass. A honey business that takes 2,000 dozen during the season. A mail order trade that takes 10,000 lbs. honey in tins, shipped direct for family use. Full equipment for running these bees for extracted honey. This splendid opportunity is open in New Jersey. Address CARNIOLAN, care Bee-Keepers' Review, Northstar, Michigan.

ITALIAN QUEENS

Beginners' outfits and other supplies. Send for list. Address

ALISO APIARY CO.,
Glendale, California.

Famous Queens direct from Italy

Bees more beautiful, more gentle, more industrious, long tongued. The best honey-gatherers.

Universal Exposition St. Louis U. S. A. 1904. The highest awards!

Extra Breeding Queens \$3; select \$2, fertilized \$1.50. Write ANTHONY BIAGGI, Pedevilla, near Bellinzona, Italian Switzerland. Member of the National Beekeepers' Association. Please in writing mention Review.

BEE-KEEPERS: Send for my Catalogue of Supplies and Special Prices on 60-lb. Square Honey Cans. They will interest you.

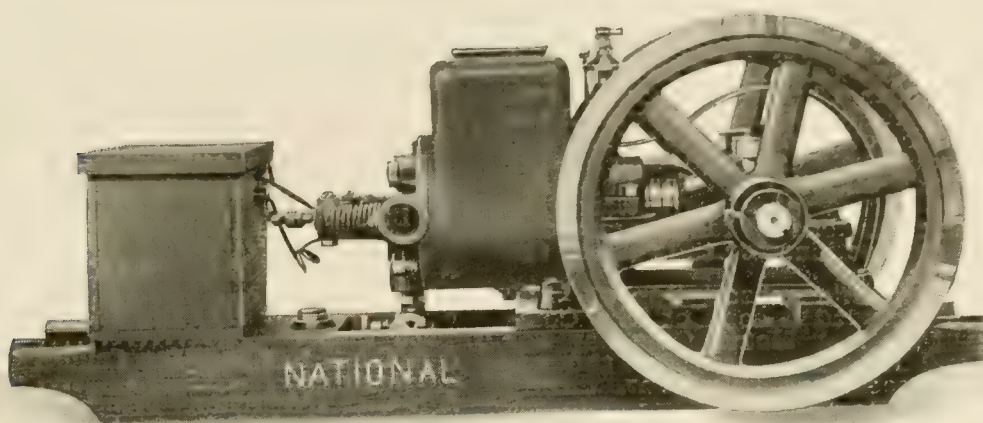
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1 1/2 H. P. Hopper-Cooled National Engine



General Description

In design, National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1 1/2; bore, 3 3/4; stroke, 4 1/2; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1 1/4; floor space, 9x36; shipping weight, 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n., Northstar, Michigan.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties.

\$1

THE LANDSCAPE GARDEN CO.,
Newburgh, N. Y.

WINTER MELON

Grows anywhere, prolific producer, most luscious taste. KEEPS ALL WINTER. Only a limited amount of seed for sale, so you will need to buy now if you grow any next season. Small sample package, 10c; large package, 25c. Descriptive circular free.

BURGESS SEED & PLANT CO.,
13 B. K., Allegan, Mich.

GET TOP NOTCH PRICES BY USING LEWIS SECTIONS FOR YOUR HONEY AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

A STORY A DAY.

A story of a day for the 365 days of 1914—that is part of what you get by subscribing \$2.00 for The Youth's Companion's new volume. The fifty-two weekly issues of The Companion will contain at least 365 stories, and all the other kinds of good reading that can be crowded between two covers—the best advice on athletics for boys, articles on dress and recreations for girls, contributions by famous men and women, suggestions for the care of the health, etc.

For the year's subscription of \$2.00 there is included a copy of The Companion Practical Home Calendar for 1914, and all the issues for the remaining weeks of this year, dating from the time the subscription is received.

If you want to know more about The Companion before subscribing, send for sample copies containing the opening chapters of Arthur Stanwood Pier's fine serial of life in a boy's school—"His Father's Son." With them we will send the full Announcement for 1914.

THE YOUTH'S COMPANION,

144 Berkeley St., Boston, Mass.

New Subscriptions Received at this Office.

New Crop White Sweet Clover Seed for Sale.

The National will again furnish their members with that fine seed of the white variety of sweet clover that we furnished a year ago from Colorado. This is the variety that furnishes such large crops of sweet clover honey in the West. The same member who furnished it a year ago will furnish it again this year, and we have made arrangements so we can furnish it at 15c per pound in lots of 10 pounds to 99 pounds; 100 pounds or more at \$13.00 per 100 pounds. This price is f. o. b. in Colorado. Order a quantity lot and have it shipped by freight to save transportation charges. Let us book your order for delivery as soon as the crop is harvested, for our stock is limited and those who wait will not likely get seed.

Sweet clover is more and more being recognized as a forage crop for stock and as a fertilizer of the soil to bring up worn-out land. The bee-keeper-farmer can "kill two birds with one stone" by producing a crop of hay and securing a crop of honey at the same time. Get your neighbors into the "habit," also, of raising sweet clover. You cannot "go wrong" by buying a

few hundred pounds of this seed and sow it this fall or early spring. Remember that our stock of this seed is limited, and if you are too late in ordering, "we told you so."

Address NATIONAL BEE-KEEPERS' ASS'N,
Northstar, Michigan.

BOOKS ON PRACTICAL BEE CULTURE.	By Post- mail. age.	
A B C and X Y Z of Bee Culture, cloth	\$2.00	\$0.30
A B C and X Y Z of Bee Culture, half leather	2.75	.30
A B C and X Y Z of Bee Culture, German ed.	2.50	.20
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Illustrated Announcement for 1914 free on request.

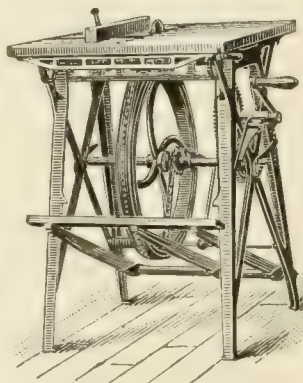
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In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500 Lbs.	300 Lbs.	100 Lbs.	50 Lbs.	25 Lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.

Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Members kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "National" also, put your mark on the packages so your wax can be recognized and mail the bill of lading to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

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THE NATIONAL BEE-KEEPERS' ASSOCIATION

NORTHSTAR, MICHIGAN.

Pack your wax in double sacks. Use no paper or other packing.

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The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx. Capacity	Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2 lb. Can.....		\$2.25	\$2.15	\$20.00
2½ lb. Can.....		2.75	2.60	24.00
3 lb. Can.....		3.00	2.85	28.00
5 lb. Pail.....	\$5.00	4.75	4.50	42.50
6 lb. Pail.....	5.25	5.00	4.75	45.00
10 lb. Pail.....	7.00	6.50	6.25	60.00
12 lb. Pail.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gollan square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb. Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

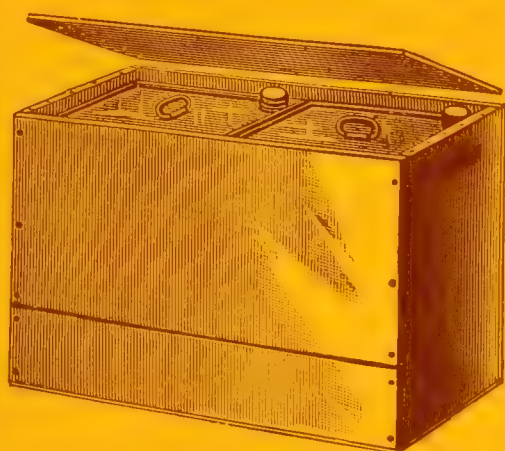
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Northstar, Michigan

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Above cans crated 50 cans in a crate, **20c** each.

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Above Cans cased in pairs with case having $\frac{7}{8}$ " end and $\frac{3}{8}$ " sides, tops and bottoms.....**60c** each

Above Cans cased in pairs as above, in lots of 250 or more cases.....**\$57** per 100 cases

Above Cans in car lots of 900 to 1,000 cases..**\$56** per 100 cases

The above 5-gallon cans with 8" screw cap, add 11c per case of two cans. Add 5c for cans cased singly, if wanted with 8" screw cap.

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10 cans in a case.....**95c** per case

We quote them in crates of 50, at **\$7.00** per hundred cans.

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National Bee-Keepers' Association,
NORTHSTAR, MICHIGAN

St. Louis, Jan. 17, '14.

The Annual Convention of the National Bee-Keepers' Association will convene at the Planters Hotel, St. Louis, Feb. 17th, 18th and 19th, 1914. The first session will be held Feb. 17, at 10 a. m. A large hall and office rooms have been provided at the hotel. The Planters Hotel is one of the finest in the city and guests will be nicely taken care of.

It is hoped that this Convention may prove one of our old-style gatherings, where we meet many of our old friends and make many new ones. All meetings will be open to all the Bee-Keepers who will come, whether members of the Association or not.

What is needed is a large attendance. Let the Bee-Keepers rally and make this a rousing gathering such as we had in 1904, during the World's Fair. Bring your wife and daughters. St. Louis will try to make it pleasant for all.

There will be room in the hall for exhibits, if any manufacturers or bee-keepers wish to show, or adjoining rooms can be had, if desired.

ROBT. A. HOLEKAMP,
Pres. St. Louis Bee-Keepers' Club,
4263 Virginia Ave.,
St. Louis, Mo.



A well-kept poultry house is a good place to keep bees. Netting separates the poultry from the bees. *See next page.*

EDITOR REVIEW:—The readers of the REVIEW cannot afford to miss the numerous important items which will appear during the succeeding year. They will include exceptionally choice material offered at the St. Louis Convention, besides numerous other papers which are promised.

(Signed) BURTON N. GATES, *President.*

The Bee-Keepers' Review

Established in 1888 by the late W. Z. Hutchinson.

OFFICIAL ORGAN OF THE
NATIONAL BEE-KEEPERS' ASSOCIATION
AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, NORTHSTAR, MICH.

WESLEY FOSTER, Assistant Editor, BOULDER, COLO.

Entered as second-class matter, December 9, 1913, at the post office at Northstar, Michigan, under the Act of March 3, 1879.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII. NORTHSTAR, MICHIGAN, FEBRUARY 1, 1914

No. 2

Bees in Buildings Above Ground

By J. A. PEARCE, Grand Rapids, Mich.

Author of Pearce Method of Bee-keeping.

I HAVE been keeping bees thirty-five years. The first fifteen years I tried about all the ways I knew of in wintering bees in the cellar and on the summer stands. These were the only methods in vogue at that time, with the exception of some who gathered their bees together into groups and packed them with all the different kinds of packing, and others who buried their bees in pits. These two latter methods seemed so absurd that I never attempted them.

For the last twenty years I have been wintering bees in buildings above ground and have not only been wintering them there, but they have also been summered there, that is, they have not been moved for twenty years, and the success of this method has been so marked that I think I should tell the bee-keeping fraternity about it, for I feel that I am standing about alone in this matter of keeping my bees in two hives instead of one, as they are now kept by bee-keepers generally. I have noticed in the Dadant pamphlet a warning to beginners not to put their bees in upper rooms or attics, as they consider it a poor place to winter them in. When I read this warning, coming from these very great gentlemen, who are at the head of the oldest American Bee Journal, and who are dealing in and sending bee supplies all

over the world and are so closely connected with all bee-keepers, I feel that I must almost be mistaken in telling our bee-keepers that I have found buildings above ground by far the best place I have ever tried to winter and summer bees in. If it was not for the experience I have had with this method for the past twenty years, I would almost doubt the superiority of buildings above ground to keep bees in.



German Straw Skep inverted, showing how bees build comb when left to nature's way.
(Study in one of the high schools in Grand Rapids, Michigan.)

Knowing, as I do, that the bee-keepers are either putting their bees down cellar, where they are left to their fate for four months or more amongst the dead and the dying in a damp atmosphere, when we are warned in the bee literature not to put our honey down cellar as it will sour and break the cappings, it is little wonder then that bees so wintered should come out in a feeble condition, with bad bowel trouble, caused by not having a chance to relieve themselves for four months. The other wing of our bee-keepers are leaving their bees out on the stands, exposed to all the storms that blow, with a snow-drift often the only protection. Many are using some kind of packing, but the trouble with most of this is that it does not protect the

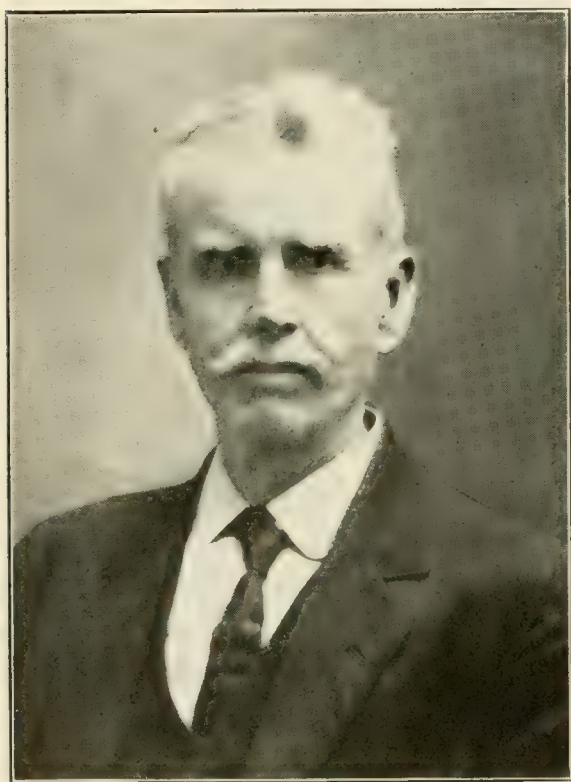
entrance, the very place that needs protection, so I have often thought that if the packing could be removed from all the hive and concentrated over the entrance in such a way as to keep the entrance from being clogged with snow and ice at all times, and the hives raised far enough from the ground so the bees could have a flight at all times when the weather is suitable, and where the one in charge could often clean out dead bees and fallen cappings, that this kind of packing might do some good, for it is generally known to bee-keepers now that it is the clogging of the entrance inside or out from some cause which is causing so much havoc to bees. A most noticeable example of this was our cold winter of a few years ago, which was so disastrous to our bees. The afternoon before the storm came on was quite warm, 74 in the shade, and the bees were having a fine flight. At night the storm commenced with a rain, which later turned to snow and ran down the hives, hermetically closing the entrance for seven weeks, as there was no weather in that time warm enough to soften the snow in the woods, and it was found that we had lost 75% of all the bees in the Northern States, while all the bees in buildings with their entrances four inches in from the wall and in the double hives, one above the other, were safe. I was very much impressed with it, for I thought if all our bees could have been arranged in this way it would have saved us millions. Therefore, if you will bear with me, I will try and tell you how to arrange bees in buildings so they are there safe year after year and making it possible for all of our people in cities, as well as in the country, to get a bountiful supply of this, the purest of all sweets.

We are exceedingly fortunate that the men in charge of our three main bee papers are all of them experienced bee-keepers of the first rank, and if we could prevail on them to build a house to hold 50 colonies of bees and work them on this plan, as we have here, I feel sure that they would become so impressed with it that they would use the vast force at their command to get this method into the hands of the people. A bee-keeper in our vicinity told me that he saw a statement that there is twenty billion dollars' worth of honey allowed to waste ungathered in this country each year. This seems too vast, as our entire crops and cattle only amount to ten billions, but anyway it is too enormous to calculate, and should make everyone of us feel proud of the calling we are engaged in.

Bees in Buildings.

Yes, it is possible to keep bees in buildings. They may be kept in attics, barn or stable lofts, and also in a well-kept poultry house, as after it is completed there is nothing to add to make it ready for the bees, and the bees do not take any of the floor space from the chickens, as the hives set on a shelf and under the shelf is an admirable place for the hens' nests, and I use old bee hives for that purpose,

and instead of screening all the windows I just screen down to the shelf at the back of the hives and cut this in six-foot lengths and hang it up when I work with the bees. Now, while I am keeping bees in my henhouse and others may also do so, I would not feel like advocating it for the reason that I fear many might not keep their hen houses as tidy as they should. But if I had a good chicken house and had bees, I would surely put them in, rather than leaving them out, exposed to all the vicissitudes that they would be exposed to in any kind of outdoor wintering. But bees in attics, upper rooms or lofts, are a grand success, as we have fully demonstrated. In fact, it is the only place where they may be kept in cities on account of the proximity of neighbors.



J. A. PEARCE
Author of Pearce Method of Bee-Keeping

It is a well-known fact that bees placed anywhere above the first story do not trouble anything on the ground below, so when they are placed in the attic, they give no annoyance to neighbors. There are nearly 200 colonies in and around Grand Rapids kept in this way and I have to hear of the first complaint about them.

Bees placed in attics are usually placed at windows, or they may be set on the floor or be raised some little distance from the floor. When we place bees at the window we usually saw out a fly hole for the bees as wide as the hive and as deep usually as the sash bar will allow. Then drop in something as thick as a two by four to

throw the hive back from the window to facilitate putting the curtain up and down and putting on coverings, and for other purposes. But when it can be done, and it almost always can, I would put the bees on the floor by the side of the window and cut the fly slot through the wall. I would cut it as wide as the hive and three or four inches up and down. Cut it in the middle between two studdings, then put a piece of two by four laid flatwise just above the fly hole. Then you can put any kind of a hive up against it and it will be, as you see, four inches in from the wall. The importance of this four-inch pocket can hardly be overestimated.

Now about light and your windows. It always pays to have plenty of light in handling bees, and if there is not light enough I

would put in one or more small windows above the hives, always cutting your glass one-half inch short at the bottom or top so that if any bees do get out when you are working with them, you will not be annoyed in thinking they will die on the windows. This is important and should not be neglected, and any windows that you do not cover should always have this small opening at the top or bottom or both. Remember, this work you are doing is for a lifetime and for your children after you, and should be done well. So just read this and stand around and look at it till you get everything right. Remember that bees in a single hive will swarm out or starve in an attic nearly as easily as out on the ground, so always and for many reasons use one hive placed over another. Any make of a hive will do to start with if you have plenty of honey cases on hand. But we always advise the best dovetailed hive, 8-frame. Two of these are in every way about right for a home for the bees.

(To be continued.)

Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordelia, Ga.

AT the close of the season, when I had about 250 colonies, there was a good little bank account to the credit of the bees and I did not draw on it much for more supplies for the next season, as I wanted to use it two seasons hence, when I would be giving the bees my entire attention and would be spreading more rapid. But 100 one-story hives were fixed up for the approaching season's increase during the winter and 200 full-depth bodies for storing room and the bees to be run mostly for extracted honey. This was done to have a lot of ready-built combs to be used for the next season's increase.

Working as I was at the sash and door factory, I picked out the most suitable lumber I could for making the bodies and also for the 100 one-story hives, and also for covers and bottoms, and cut it out and worked it up by hand and nailed it up well, buying only the frames from the factory, which I wired and used full-sheet foundation. This was done at night and at odd times during the winter, before the next season, but a girl was hired to fix up most of the frames, as I could not do all the work. I made a little mistake here. I should not have used yellow pine lumber for this purpose, even if I did use great care in selecting it, for in the first place it was too heavy and then it warped and twisted badly and most of it had to be culled out during the next few seasons. At that time there was no more suitable lumber available, so far as I knew. I could have bought regular dovetail bodies, but I never made more out of such lumber for my bee business in

Georgia. I used the regular factory-made bodies, but I did make covers and bottoms until there was suitable cypress lumber available.

Coming now to my apiary work for the season, for which I had everything ready. Again I was let off from the shop for a few days during the season, and in early spring, after some warm sunny days, the bees were looked over and stores were equalized. Later, just at the approach of the honey flow, they were looked over again and storing room added to the strongest colonies. Such colonies were elevated from the bottom boards in the way I have already described. Then nothing else was done but a close eye kept on the first great honey plant, as the one I expected the first surplus honey from, and when it was coming well in bloom another round was made, and during this round more hives were ventilated and storing room added where it was needed. Also, some increase was made where the colonies were very strong, some of which had started queen cells. A week later another round was made and about the same thing done, the increase being made in the usual manner by dividing the colonies into two equal parts, giving the queen to the parts set on new stands. If no queens were found where cells were being built, both parts were given frame containing cells, and in colonies having no cell, and where queens could not be found, each division was given a ripe queen cell from colonies having them.

At this time we had too many bees in the yards, and having two other locations picked out and the apiary sites asked for, I prepared 52 colonies, or rather the divisions I had made by placing screen covers on them. The entrances were closed at night and next morning we were there very early with three trays (for as yet we had no conveyance) and carried them to one of the new locations. A week later these bees and the others were looked over in the usual manner, but the brood nests in these colonies were spread by inserting empty combs in the middle of them and in the stronger ones full-sheet foundation. This was done during the first honey flow. A greater one was yet to come, but was not long off, as there was no intermission between them. Another visit was made about the mid point between the two flows, at which there was some honey to be removed, which was extracted and the comb put back on the bees at once. A week later or about that much time elapsed between the visits, the bees were looked over in the usual way, but by this time conditions were ideal and the bees were making great headway storing, and the strongest division at the new yard had their brood chamber full of brood and storing room given them, 50 bodies being carried there at once for that purpose. By this time the bees were settled down at work. There was little indication of swarming and I lacked about 20 colonies of making as much increase as I wanted to, but I would not tear **my** bees up under such conditions, for I knew I had a light flow in the fall and could make even more increase than that then, and so the hive

bodies prepared for this purpose were given the bees for storing room. We spent a day at each yard on our next round looking over the bees, extracting the honey that was ready, and giving the bees back combs. I had a cheaply constructed honey house at the new yard, which I made of boards 12 inches wide, which I cut out at home and hauled there and set up at the expense of less than \$9.00, but had houses at the other two yards.

On our next round we did the same work as on the former one, the flow being yet on, but by the next round the flow was off and all the surplus honey removed, which was not all extracted honey, for some of it was in one pound sections and some chunk honey in regulation shallow extracting frames, which took more time to pack, and we left it for the last round, when we would have more time. At this round we left each yard late in the afternoon, when we set the extracting combs back on the bees to avoid robbing, then loaded on the honey and carried it in to the home yard, the extracted honey in cans and barrels, and the other honey in supers.

The bees at the new yard were run entirely for extracted honey and made 384 gallons during the spring flow after they built up, and the other yards did equally as well.

This raised the "bee fever" on me to such a high degree as had never been heard of before, and perhaps never will be again. From that time on down to the present it has never cooled down one degree. The honey was all sold at a handsome price and returns put in the bank, in which we already had a nice little account, and all was to be expended on us and the bees next year, but during this time and up to then I kept my work up at the shop and made a living thereby. But later on toward fall, when I expected another light flow, I hired an experienced apiarist to raise queens and requeen all my bees and get things in fine trim for a great season the following year. Also, he finished making the desired amount of increase and took bees from all the yards and established another one, and put all the bees up for winter in the best of shape, and now comes the leap for the greater.

(To be continued.)

Field Notes From Tennessee.

J. M. BUCHANAN, Franklin, Tenn.

Are you doing anything to increase the consumption of honey? Too many people look on honey as a medicine, to be taken in case of colds, or croup, and not as an article of food. This we know is all wrong, but are we doing all we can to correct it? Teach the dear public that honey is made to be eaten, and that it has a high food value. Show them that it is cheaper than preserves, or butter, or even pork. Be sure you produce good, ripe, clean honey, and talk it up, and keep it before the public, and there will be no trouble to sell your crop.

Have you nailed up those new hives and frames yet? or cleaned up the supers, and gotten them ready for use, or are you waiting till the bees swarm before you make preparations for them? No use to wait to see whether there is going to be a crop of honey next season. It will be too late then. Get ready for it now, and when the flow comes you won't be caught napping, as you were the past season.

* * * *

The mild weather during the fall and early winter has given the white clover a chance to make a good growth. As there was an enormous crop of seed last year, there should be a fine lot of young plants for next season's crop. The prospect looks good, so far, anyway.

* * * *

Next in importance to the white clover as a honey plant, in this section, is locust. This does not always yield, however; about two out of three years is as much as we can expect in the way of a crop from locust. But usually when it hits, it hits hard. I have seen a colony on scales increase ten to fifteen pounds a day during the locust flow. The honey is water white, slow to granulate, of good body and flavor, many preferring it to clover. The flow here is about the first of May.

* * * *

The queen breeding plant of Mr. J. M. Davis & Son, of Spring Hill, Tenn., is perhaps one of the most extensive of its kind in the world. They operate near a thousand nuclei, and their output of queens for the past four years has been from 4,000 to 6,000 per season. It is a liberal education to go to their place and see how they do it. And last year, in addition to the queen business, they got over 20,000 pounds of honey. Mr. J. M. Davis has been a bee-keeper and queen breeder for more than forty years. He has been several times president of the Tennessee Bee-Keepers' Association.

* * * *

I wish somebody would devise some better method of fastening foundation in shallow frames. Pouring hot wax along the top-bar leaves a heavy ridge of wax that is very much in the way when cutting out the combs. It may do well enough for extracting combs, but we have a large trade in bulk comb honey, and there is a lot of waste, and much annoyance on that account.

St. Louis in 1914.

All eyes are now turned toward St. Louis.

Field Notes From Iowa.

J. W. STINE, Deputy Inspector, Salem, Iowa.

There should be a large delegation of bee-keepers from Iowa at the National Convention at St. Louis. It may be some time before the National will meet as close to Iowa as this. Although February will be a busy month with the writer, being engaged in a revival meeting up to the middle of the month, still I feel I cannot afford to miss the good time coming at this convention, and shall try to arrange my work so I can attend. I hope to meet at least some of the men there whose subscriptions to the *Review* and National membership I received last year.

* * *

The Carniolecan queen received last August from Mr. Stragar, of Austria, did fine work in building up the colony last Fall and had the most brood in the hive the fore part of October of any colony of bees I ever owned. They had a good supply of late Fall honey to supply them until fruit-bloom in the spring. The bees are quite gentle and act very much like the Italian bee by not running over the combs or bunching up like the common black bee does. I expect to try this colony out next year for its building up qualities, entering super qualities and non-swarmling qualities. I shall try to keep the swarming fever down and work them for comb honey.

* * *

I wish to correct the mistake in the December notes in regard to carelessness in treating diseases. The statement should read that great care be taken to have all *tools* thoroughly disinfected instead of all tables, as it reads. Also would call attention to the mistake in the name of the treasurer in the list of officers in the January number of the *Review*. The name should be C. H. True, instead of C. H. Tome, as it now reads.



MR. AND MRS. J. W. STINE

Both are bee-keepers, and Mr. Stine writes that it would not be fair under the circumstances to show his picture in the *Review* without that of his wife.

EDITORIAL CORNER

Do not fail to read, beginning on page 59 of this number of the REVIEW, the program of the National Bee-Keepers' Association. Likely no National program ever excelled in noted personality. The subjects are well selected and in the hands of those who are very capable of handling them. All bee-keepers living within a thousand miles of St. Louis should attend.

Notice to Secretaries.

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we were very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the REVIEW from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

J. S. Whittemore, Massachusetts.....	7
Dr. L. D. Leonard, Minnesota.....	9
S. W. Snyder, Iowa.....	3
Geo. W. Williams, Indiana.....	2
L. C. Dadant, Illinois.....	1

Member A. W. Smith, Parksville, N. Y., sends us 50 cents to apply upon the REVIEW debt, and adds: "Wouldn't it be a good plan for each subscriber to 'chip in' say 50 cents each, and that would pay the REVIEW debt?" Yes, if each one receiving the REVIEW were to contribute 50 cents toward the debt, it would amount to about \$1,300, nearly enough to pay the debt twice. Surely, where there are so many of us, there is positively no excuse of owing a cent to any one. What's the matter with bee-keepers?

The Experience of a National Member in Getting Up a Co-operative Order of a Car of Supplies.

As you know, I got the car order off after a lot of delay. We cannot sell as many supplies where the bee men have to put up their money thirty days or more before they get the supplies as we could if we had the supplies here and each could buy what he wanted. The

large beekeepers are going to the local dealer and telling him they will need more supplies than we ordered in the car, so he will be encouraged to order a car. They want to be sure to have a stock of supplies on hand to fall back on in case a large crop should materialize. Another big item is that they do not have to pay for the supplies until fall. When they order ahead of time they will not order any more than they can help and then if they get a good crop they have to go and get more. I think some arrangement should be made to carry a line of supplies here all the time.

I was delayed by some of the men not putting up their money when they said they would, and it took some time to get them all in and even then I had to leave some orders out because of their delay. One man wanted me to send the order in and put up the money myself until the supplies got here, and then he would pay for them, but I left him out. He came to me the day after I sent the order and asked me if I had sent in the order, and I said I had. He said he didn't want his order as he was going to get his supplies of the local dealer as he wanted them at once. If I had put up the money for him he would have turned down the order and I would have had to sell it to some one else or have taken the stuff myself. The men are all enthusiastic for co-operation but when it comes to paying down the cash in advance it comes in hard. But we got up a big car even though we were later than we had figured on.

The Northern Michigan Affiliated Association of Bee-keepers will hold their Annual Convention in Petoskey, Mich., March 10-11th. Headquarters will be at the Cushman House, where a reduced rate of \$2 per day has been secured. The convention will be held in the Court House. A good program is in course of preparation, which will appear in the March number of the REVIEW. Prizes will be given as usual for the best honey and wax; watch for the program next month for particulars.

Following this Petoskey convention, the next day, the 12th of March, a one-day convention will be held at Lake City, Mich. Both programs will be printed in one, and it is understood that this Lake City meeting will be wholly devoted to the discussion of diseases of brood. Inspector Millen and Prof. Pettit, both of Lansing, have expressed their intention of being at both of these meetings. The editor of the REVIEW will also attend. These Northern Michigan conventions are meetings of specialists, who have many of them spent the greater part of their life in our beloved pursuit, and consequently are always very instructive. It will pay a producer to go 500 miles to attend these meetings. Do not miss this opportunity to learn many things about our business that you may have never thought of before. You are invited.

A mistake was made somewhere in the Pierce article, January REVIEW, in giving dimensions of his bee house. It should read 7 ft. high, not 5, as that would be altogether too low for a person to work in comfortably.

The National Association Aggressive.

The National Association needs an organizer, or several of them. The REVIEW should have a representative to attend as many local conventions as possible, and also organize locals wherever possible. He would supply the ginger where such might be lacking. An organizer's work would be to effect the organization of live locals that would subscribe for the REVIEW in a body, advertise in the REVIEW, make up co-operative car orders or less of supplies, and sell their honey through the organizer-agent, or, if selling locally, maintain a uniform price.

There should be three or more such organizers or National agents: one in the west, one in the central states, and one in the east. It is possible to try this matter out without any financial aid on the part of the National treasury, but if it succeeds it will put funds in the treasury.

Send your delegates to the National convention instructed to support such a move, and remember this is *one* of the *most* important works of the National to be undertaken. We must build up the membership and income of the organization, and we cannot do it without making it an object for bee men to join.

Bent County, in the Arkansas valley, has thirty thousand acres in alfalfa and five thousand acres in sugar beets. The proportion of acreage in alfalfa in comparison with beets is increasing. There are some less than five thousand colonies of bees in the county, so that on the average there is at least five acres of alfalfa for each hive of bees.

It is well within the figure to place the acreage of alfalfa in the Arkansas valley at one hundred thousand acres. In the valley there are perhaps twenty-five thousand colonies of bees that produced on the average thirty-five pounds of honey. The Arkansas valley, comprising Prowers, Bent, Otero, Crowley, Pueblo and Fremont counties, is one of the principal honey producing areas of Colorado.

The enclosed report of the status of the honey industry in Colorado, printed in the New Year's edition of the *Rocky Mountain News*, covers conditions very fairly, taking everything into consideration. It should, however, be mentioned that the figures given for honey crop is shipping production, while total production would probably be twenty-five per cent larger. It is as follows:

The production of honey is becoming a more and more important sideline of activity with Colorado farmers, year after year. This is best shown by the

records of the census bureau in 1900 and 1910 and the figures that have been compiled for the industry for 1913. In 1900 Colorado ranked twenty-first among the states in production of honey. In 1910 the census bureau found that it had advanced to fourteenth place, its annual output having increased from 1,835,000 pounds to 2,306,492 pounds. In 1913 the output was approximately 4,150,000 pounds, as shown by the records of the various railroads and express companies handling shipments. Indications are that the state now ranks not lower than tenth as a producer of honey, having advanced to that position from twenty-first in thirteen years.

About 7 per cent of the farmers in the state were keeping bees in 1910. The percentage has increased slightly in that period, but the number of colonies of bees has increased from 71,434 then to about 92,150 now. The increase has been confined largely to persons who have been keeping bees for years and who have added new colonies.

Extensive growing of alfalfa is one of the principal reasons for the importance of the bee keeping industry in Colorado, the bloom furnishing honey in abundance. Fruit growing also aids the industry materially, since the fruit blossoms are also rich in honey.

The Western slope leads in the production of honey, with the Arkansas and South Platte valleys both following closely in its wake. Otero county holds the lead, with an annual production of about 400,000 pounds, valued at about \$44,000. Delta county ranks second, producing annually about 335,000 pounds, with Montrose a close third. Larimer county, which ranked fifth in 1910, has advanced to fourth place.

The keeping of bees in the irrigated districts of the state is certain to continue to increase in importance as an industry with each year, for the reason that the revenue is considerable and the farmer who raises alfalfa finds it possible to maintain several stands of bees with very little additional work. Better methods of hiving and caring for the bees and of handling young colonies are being put into practice each year, with the result that bee-keepers have increased their output for each colony to a marked extent in the past ten years. An association of bee-keepers of the state holds meetings at frequent intervals and develops many excellent methods for making bee-keeping a more pleasant and profitable industry.

Some Things That Were Said and Done at the Michigan State Meet at Detroit in December.

After reading the minutes of the last meeting by Secretary Schmidt, President Morse's address was listened to. He said in part: Generally speaking, the crop of surplus in Michigan for the season of 1913 had been satisfactory. Some few locations, usually caused by the drouth toward the latter part of the clover flow, had a short crop. This feature suggests the practice of not "putting one's eggs all in one basket," but scatter out one's bee yards in different locations and by so doing secure a crop in some favorably located yard each year.

A Net Weight Package Recommended

According to late laws and usage, it is now advisable to use a net weight package for extracted honey. The fact is, the time is fast arriving when all packages put upon the market will be required by law to be marked plainly just what, and how much they contain.

"*The Production of Comb Honey*," by L. S. Griggs, Flint, Mich., was listened to very closely and was likely as valuable a talk as was on the program. He said in part: that bees must be wintered

well and in good shape at the beginning of the clover flow, or poor success would be the result. The most important feature in Mr. Griggs' method of producing fancy comb honey is his method of using a set of fence separators on the outside of both brood nest and comb honey super, thus giving a double space at the outside for bees to cluster, causing them to begin work and finish at that part of the super much sooner than when no double space is provided at this point. Arranged this way, bees did not hesitate about passing up through two to four supers and working in sections. For Summer ventilation, a seven-eighth inch deep entrance is preferred. The swarming problem is solved with the shook swarm method, each yard being visited once a week. To prevent absconding, one empty comb is put in the center of the new hive before shaking. All swarms that are preparing to swarm by building cells are shaken at these weekly visits. With this method he has taken 180 sections from single colonies in one season, and an average of 85 pounds for the whole yard. Mr. Griggs uses bottom starters in section as well as a wide one at the top, thus making the section full of foundation, except $\frac{3}{8}$ -inch between the two starters, which is left for room for the foundation to sag without buckling. In feeding back to get unfinished sections finished, honey is fed from under the swarm, and with this method practically all the honey fed was stored in the sections. Mr. Griggs keeps 400 colonies. After saying the above he says that comb honey costs too much to produce and he now produces extracted honey exclusively.

Prof. Morley Pettit, Provincial Apiarist, Guelph, Ont., recommends a good text book in preference to a bee journal for the beginner. Also recommends that he take a course with some experienced bee-keeper before launching into the business on his own hook. Years ago students with D. A. Jones used to pay \$4.00 per week board, besides working for nothing to learn the bee business. It is different now. (*Concluded next month.*)

A few of those who will attend the National Convention at St. Louis this month have written this office. They are as follows: J. D. Roberts, Frankford, Mo.; J. V. Ormond, Elba, Ark.; W. J. Stine, Salem, Iowa; J. E. Morse, Saginaw, Mich.; E. D. Townsend, Northstar, Mich.; C. P. Dadant, Hamilton, Ill.; J. H. Stoneman, Blackfoot, Idaho; Paul Heise, Warsaw, Ill.

The annual meeting of the Pennsylvania State Bee-Keepers' Association will be held in the Capitol Building, Harrisburg, February 20 and 21. An interesting program is being prepared.

H. C. KLINGER, Secretary, Liverpool, O.

The National Bee-Keepers' Association

And its Affiliated Associations

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Amherst, Mass.
 DR. H. A. SURFACE, Vice-Pres. Harrisburg, Pa.
 E. B. TYRRELL, Secretary.....Detroit, Mich.
 214 Hammond Bldg.
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Affiliated Associations and Their Secretaries.

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 ADIRONDACK—H. E. Gray...Fort Edward, N. Y.
 COLORADO—Wesley Foster.....Boulder, Colo.
 CHICAGO-NORTHWESTERN—L. C. Dadant..
Hamilton, Ill.
 HAMPSHIRE—HAMPDEN—FRANKLIN—Dr..
 Burton N. Gates.....Amherst, Mass.
 IDAHO—R. D. Bradshaw.....Notus, Ida.
 TWIN FALLS—C. H. Stinson..Twin Falls, Ida.
 IDAHO HONEY PRODUCERS' ASSN.—F. C.
 Bowman.....Idaho Falls
 ILLINOIS—Jas. A. Stone..Rt. 4, Springfield, Ill.
 INDIANA—Geo. W. Williams, Redkey, Ind.
 KANSAS—O. A. Keen.....Topeka, Kans.
 MASS. EASTERN SOCIETY OF BEE-KEEPERS..
 ..Leslie A. M. Stewart, Franklin, Mass.
 MICHIGAN—O. H. Schmidt.....
Rt. 5, Bay City, Mich.
 MINNESOTA—Dr. L. D. Leonard.....
 ..515 Syndicate Bldg., Minneapolis, Minn.
 MISSOURI—J. F. Diemer.....Liberty, Mo.
 NEW JERSEY—E. G. Carr....New Egypt, N. J.

N. CALIFORNIA—Alwin P. Heim.....
Box 16, Fair Oaks, Calif
 N. MICHIGAN—Ira D. Bartlett.....
East Jordan, Mich.
 OHIO—Prof. N. E. Shaw, Dept. of Agr...
Columbus, Ohio
 OREGON—H. WILSON.....Corvallis, Ore.
 PECOS VALLEY—Henry C. Barron.....
Hagerman, New Mexico
 PENNSYLVANIA—H. C. Klinger, Liverpool, Pa.
 PUERTO RICO—J. W. Van Leenhoff.....
Ponce, Puerto Rico, 11 Marina St.
 SOUTH IDAHO AND EAST OREGON—R. D.
 Bradshaw.....Payette, Ida.
 TENNESSEE—J. M. Buchanan, Franklin, Tenn.
 TEXAS—Willis C. Collier, Box 154.....
Goliad, Texas
 VERMONT—P. E. Crane.....Middlebury, Vt.
 WASHINGTON—J. B. Ramage.....
Rt. 2, N. Yakima, Wash.
 WISCONSIN—Gus Dittmer.....Augusta, Wis.
 WORCESTER COUNTY—J. S. Whittemore..
Leicester, Mass.

The regular annual meeting of the Kansas State Bee-Keepers' Association will be held at the Commercial Club Rooms, Topeka, February 26 and 27. All persons interested in bees are cordially invited to attend. The meeting will close with a banquet on the afternoon of the 27th.

O. A. KEENE, Secretary.

A District Bee-Keepers' Convention will be held in the County Council Building, London, Ont., on February 12 and 13, with the following program:

Thursday, 1:30 p. m.—“The Use of Steam in the Workshop,” Denis Nolan, Newton Robinson. “Wintering Bees,” Jas. Armstrong, Cheapside. At 7:30 p. m.—“Marketing Honey,” Prof. Pettit, O. A. C., Guelph. “Spring Management,” John Lunn, Fingal.

Friday, 9:30 a. m.—“Extracted Honey Production,” R. F. Holtermann. “Queen Rearing,” Wm. Elliott, Adelaide. At 1:30 p. m.—“Bee-Keeping Appliances,” W. A. Chrysler, Chatham. “Question Drawer,” John Newton, Thamesford.

A cordial invitation is extended to every one to come and assist making this a good convention.

E. T. BRAINARD, Secretary.



Michigan Bee-Keepers' Association, Detroit, Mich., December 10-11, 1913.



Iowa Bee-Keepers' Association, Des Moines, Iowa, December 10-11-12, 1913.

The Eastern Massachusetts Bee-Keepers' Association will hold the fourth meeting of 1913-14 series on Saturday, February 7, at 7 o'clock p. m. at Ford Hall, Ashburton Place, Boston, Mass. Business: Adoption of new constitution. Burton N. Gates, Ph. D., Inspector of Apiaries of Massachusetts, will be the speaker. A full attendance is desired.

LESLIE A. M. STEWART, Secretary-Treasurer.

PRELIMINARY PROGRAM

National Bee-Keepers' Association Convention, St. Louis, Mo., February 17, 18, 19, 1914.

The headquarters of the National Bee-Keepers' Association Convention will be the Planters Hotel, where the meetings will be held. Rooms, \$1.25 and up. Under date of January 10th, Manager Walker, of the Planters Hotel, wrote Secretary Tyrrell in part as follows:

We have two assembly rooms on our parlor floor, one with a seating capacity of eight hundred, and the other with a seating capacity of three hundred; also any number of smaller rooms that may be used for committee meetings, secretary's office, etc. Any or all of these we can place at your disposal free of charge, provided the Planters Hotel is selected as headquarters for this meeting.

"Our rates for your delegates will be as follows:

Rooms for one person without bath	\$1.50 to \$2.00 per day
Rooms for one person with bath	2.50 to 5.00 " "
Rooms for two persons without bath	2.50 to 3.00 " "
Rooms for two persons with bath.....	3.50 to 7.00 " "
For each person over two in a room.....	1.00 additional.

"We do not in any manner operate on the American plan, but we serve table d'hote meals at the following prices: Breakfast, 75c.; luncheon, 60c.; dinner, \$1.00; club breakfast, 30c. to \$1.00.

"Laclede, Market and Eighteenth street cars passing Union Station will bring you right to the door of the hotel."

Those wishing hotel reservations may request the Secretary, Mr. E. B. Tyrrell, 214 Hammond Building, Detroit, Mich., to assist them.

Some of the peculiar features of this convention may be outlined. Arrangements are pending for the use of the new moving picture film relating to bee-keeping. The showing of this film will possibly be in a moving picture theater.

An attempt is being made to procure ample space for displays of manufacturers, dealers and inventors of new appliances. Those intending to make displays should communicate with the Secretary.

The meetings of the convention will be divided as found requisite, devoting time to the reading of the numerous important papers, as well as to the transaction of business by the delegates.

It may be announced to the delegates, however, that a number of vital and important problems confront the Association for action.

Every affiliated society should, if possible, be represented by a delegate. Otherwise send communications and instructions to the Secretary.

The program as announced below is preliminary and is subject to change. An effort has been made, however, to secure the very best talent available in the country and abroad. In the absence of authors of papers, the contributions may be read for the writers. Any suggestions or additions will be appreciated.

TUESDAY, FEBRUARY 17TH.

Morning:

9:30—Opening Session.

Seating of official delegates.

Appointment of committees as well as routine business will prosecuted in due form.

"Suggestions for the Betterment of the National."—Editor
tor E. D. Townsend, Northstar, Mich.

Afternoon:

1:00—Session for discussion. (Since the program is constantly growing, final arrangements are not yet possible. The papers offered are, therefore, grouped and listed below.)

Evening:

7:00—Business session.

8:00—Lectures with the lantern.

WEDNESDAY, FEBRUARY 18TH.

Morning:

9:00—Business Session, with papers as time may permit.

Afternoon:

1:30—Short Business Session.

2:00—Discussions and Papers.

Evening:

7:00—Business Session.

8:00—Lectures.

THURSDAY, FEBRUARY 19TH.

Morning:

9:00—Business Session, followed by papers as may prove possible.

Afternoon:

2:00—Closing Session. Final adjournment is subject to the business program.

PROGRAM OF PAPERS AND CONTRIBUTIONS SUBJECT TO ARRANGEMENT.

Apicultural Education and Promotion:

"The Question of Apicultural Education."—Prof. Morley Pettit,
Guelph, Ontario, Can.

"Developing the Industry."—Mr. Frank C. Pellett, Atlantic, Iowa.

"Modern Business Methods Applied to Bee-Keeping."—Mr. F. B. Cavanagh, Hebron, Ind.

"Organization of the Bee-Keepers."—Mr. Jenner F. Morse, Saginaw, Mich.

The Queen Business:

"Direct Introduction of Queens."—Mr. J. M. Buchanan, Franklin, Tenn.

"Selective Breeding."—Mr. George B. Howe, Black River, N. Y.

Bee-keeping by Localities:

"New Jersey Bee-Keeping."—Prof. T. J. Headlee, New Brunswick, N. J.

"Honey Resources of New Jersey."—Mr. E. G. Carr, New Egypt, N. J.

"California Bee-Keeping, Up and Down to Date."—Mr. J. D. Bixby, Covina, Calif.

"Bee-Keeping in Southern California."—Mr. Homer Mathewson, Binghamton, N. Y.

"History of Bee-Keeping in California."—Mr. J. E. Pleasants, Orange, Calif.

"Bee-Keeping in Southern California."—Mr. J. E. Pleasants, Orange, Calif.

"Development of Apiculture in Oregon."—Prof. H. F. Wilson, Corvallis, Ore.

"Bee-Keeping in Europe."—Mr. C. P. Dadant, Hamilton, Ill.

"Making a Market for Five Hundred Cars of Western Honey."—Mr. Wesley Foster, Boulder, Colo.

Wintering:

"Building the Perfect Bee Cellar."—Mr. E. S. Miller, Valparaiso, Ind.

"Humidity in the Wintering of Bees."—Dr. E. F. Phillips, Washington, D. C.

(Others to be announced.)

Special and General Subjects:

"Restoring the Soil Fertility and Producing Honey."—Dr. H. A. Surface, Harrisburg, Penn.

"The Secretion of Nectar."—Dr. F. W. L. Sladen, Ottawa, Can. Subject to be announced.—Mr. J. J. Anderson, Salem, Ida.

"Moving Bees From the North to the South for Increase."—Mr. E. R. Root, Medina, O.

"Bee-Keeping as a Money Making Proposition."—J. J. Wilder, Cordele, Ga.

Subject to be Announced.—Prof. Wilmon Newell, College Station, Tex.

"Automatic Recording Instrument."—Prof. C. E. Sanborn, Stillwater, Okla.

"Wintering Bees in Vermont."—J. E. Crane, Middlebury, Vt.

"Section Honey Without Separators."—Allen Latham, Norwichtown, Ct.

"Why?"—Arthur C. Miller, Providence, R. I.

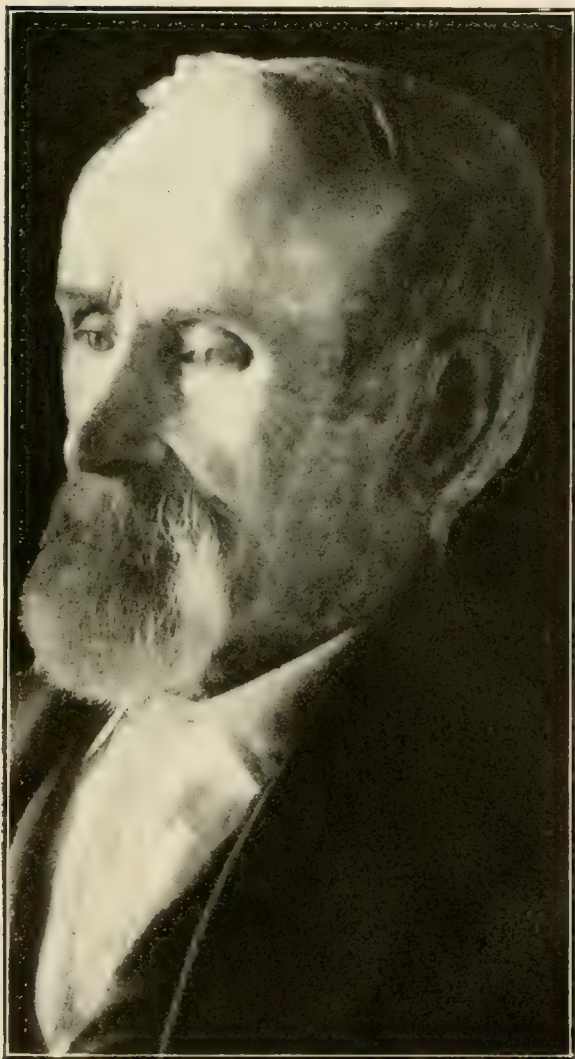
Remember, there are other papers to be presented, which cannot yet be announced.

All interested in bees, especially ladies, are cordially invited to attend the meetings. The sessions are open to the public. Business sessions, however, are participated in by delegates.

BURTON N. GATES, *Chairman*,

January 15, 1914.

Amherst, Mass.



THE LATE WILLIAM RILEY

Editor REVIEW—I am enclosing clipping from paper which will inform you of the death of my dear father. At the time of his death he had one hundred and twenty-five stands, and while

I cannot handle so many, I shall try to keep perhaps half of them. At the time of father's death he was a reader of your paper. Let the same continue to come and at expiration I will renew.

Yours truly,

J. R. RILEY.

Death Summons William Riley at His Home in Breeds, Ill.

Death's summons came to William Riley Wednesday night at 11:30 o'clock, at his home in Breeds. He had suffered four days from pneumonia.

Mr. Riley was widely known as a bee-keeper. His apiary is the largest in the county and perhaps the oldest. He had made the care of bees his occupation for a quarter of a century. Watching and studying the busy little honey-gathering insects was his favorite recreation for a dozen years before. He understood them thoroughly, managed them with eminent success, and far and near was rated an authority on all pertaining to bee-keeping.

He was also one of Fulton county's pioneer coal miners and the first mine inspector of the county.

William Riley was a man who had the confidence and high esteem of all acquaintances. He was just. He was generous. He was tolerant. He read much, thought much, and his views were positive; but he never quarreled with those whose judgment led them to reach different conclusions.

The last illness started from a cold, occasioned by exposure to the chill and damp Saturday when Mr. Riley came to Canton to give his attention to some business matters.

He had been previously in his accustomed health, excepting for a slight cold which had troubled him since Tuesday.

NATIONAL GRADING RULES

Adopted at Cincinnati, Feb. 13, 1913.

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these three respects that any section shall be representative of the contents of the case.

I. FINISH:

1. *Extra Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. *Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. *No. 1*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. *No. 2*—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. *Heavy*—No section designated as heavy to weigh less than fourteen ounces.

2. *Medium*—No section designated as medium to weigh less than twelve ounces.

3. *Light*—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched up sections; sections weighing less than ten ounces.

CHICAGO—Honey market is easy, with prices uncertain other than for the fancy grades of both comb and extracted, which remain comparatively steady at recent quotations. The supply is large for season of the year in all grades.

Jan. 13. R. A. BURNETT & CO.,
173 W. South Water St.

KANSAS CITY, MO.—The demand for both comb and extracted honey is very light, especially for comb. Receipts of extracted light, but receipts of comb large. We quote as follows: No. 1 white comb, 24 sec., per case \$2.60 to \$2.75; No. 2 white comb, 24 sec., per case, \$2.40 to \$2.50. No. 1 Amber comb, sec., per case, \$2.75; No. 2 Amber comb, sec., per

case, \$2.25 to \$2.50. Extracted White, per pound, 8 to 8½c; Extracted Amber, per pound, 7 to 8c. Beeswax, per pound, 25 to 30c.

Yours very truly,
C. C. CLEMONS PRODUCE CO.
Jan. 14.

BEE-KEEPERS' REVIEW—I have sold the car of honey I wrote you of some time ago. All honey is now sold in this valley. Wishing you a Merry Xmas and a Happy New Year, I remain, yours truly,
W. W. MARTIN.

National Members Having Honey for Sale.

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th

of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ills.
A. J. Diebold, Seneca, Ill.
Wm. Marshall, Carpentersville, Ill.
W. T. Sherman, Elkhorn, Wis.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint—Cotton Blend.

Wilmon Newell, College Station, Tex.
Alfalfa

W. A. Martin, Lander, Wyoming.
Chas. H. Hanney, Lander, Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
J. C. Mathews, Montrose, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association,
Idaho Falls, Idaho.
Arizon Honey Exchange, Tampe, Arizona.

Raspberry

C. F. Smith, Cheboygan, Mich.
Geo. H. Kirkpatrick, Rapid City, Mich.
P. W. Sowinski, Bellaire, Mich.
F. D. Stephens, Box 383, West Branch,
Mich.

Amber

G. Frank Pease, Marshall, Mich.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKee, Velasco, Texas.
L. O. Brainard, Lone Rock, Wis.
E. D. Townsend & Sons, Northstar,
Mich.
Ira D. Bartlett, East Jordan, Mich.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Guirin-The-Queen-Breeder, Bellevue, O.
P. W. Sowinski, Bellaire, Mich.
Thos. Worthington, Leota Landing,
Miss.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franksville,
Wis.

Clover and Basswood blend

Elias Fox, Union Center, Wis.
Dr. C. G. Luft, Fremont, Ohio.
Frank Kittenger, Caledonia, Wis.

White Clover

F. X. Arnold, Deer Plains, Ill.
B. F. Schmidt, North Buena Vista,
Iowa.

E. E. Townsend, Fort Dodge, Iowa.
Byron S. Hastings, Rt. 5, Brookville,
Ind.

A. H. Guernsey, Ionia, Mich.
E. H. Canfield, Carson City, Mich.
John G. Wagner, Elkader, Iowa.
S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
Orville Safford, Fort Edwards, N. Y.
C. J. Oldenberg, Belle Plains, Minn.
Floyd Markham, Ypsilanti, Mich.
J. H. Allemier, Delphos, Ohio.
John Olson, Davis, Ill.
F. C. Hutchins, Santa Clara, N. Y.
Dr. C. G. Luft & Son, Fremont, Ohio.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, La Mars, Iowa.
A. S. Crotzer, Lena, Ill.
Rev. F. Schedtler, Rt. 7, Sumner, Iowa.
Geo. A. Hyde, New Canton, Ill.
W. H. Pearson, Mitchellville, Iowa.
John S. Coe, Boyce, Va.
M. H. Lind, Baders, Ill.
Arthur Thayer, Rt. 2, Freeland, Mich.
Frank Kittenger, Caledonia, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prisk, Mineral Point, Wis.
Wm. Fox, Withee, Wis.
R. V. Langdon, Rt. 5, Baraboo, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
Niels A. Nelson, Dike Iowa.
Geo. E. Capwell, Cottonwood Falls,
Kansas.

Chas. Soames, Peru, Ind.
L. O. Brainard, Lone Rock, Wis.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Charles Lotz, Monroe, Iowa.
Joseph M. Elsbree, Waverly, N. Y.
Bell E. Berryman, 2308 20th Ave., Central
City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
J. H. Haughey, Berrien Springs, Mich.

Mangrove, White as Clover

A. F. Brown, Hawks Park, Fla.

Partridge Pea

J. J. Wilder, Cordale, Ga.

Buckwheat

Jas. McNeill, Hudson, N. Y.
J. A. Janssen, Rt. 4, Charlevoix, Mich.
E. A. Duax, Chippewa Falls, Wis.
Ira D. Bartlett, East Jordan, Mich.
N. L. Stevens, Rt. 18, Maravia, N. Y.
Wilmer Clarke, Easleyville, N. Y.

Mesquite.

Arizona Honey Exchange, Tampe, Arizona.

THIS AND THAT

Forestville, N. Y.

Editor REVIEW: I am "at sea" as to why I am considered worthy of the pleasure of twelve free visits from the REVIEW, but want you to know that it is highly appreciated just the same. Long may the National live and continue in the good cause.

Very respectfully,

A. S. PARSON.

Nov. 11, 1913.

MR. E. D. TOWNSEND—You may take my name from list in REVIEW as "Having Honey For Sale," as I am about sold out. It certainly is a good idea. I have also sold quite largely at home in 6-lb. pails. I am also sending list of names eligible to be members of National Association. Thanking you for past favors, I remain,

Sincerely yours,

WM. VOLLMER,

Route No. 2, Akron, N. Y.

Dec. 1, 1913.

Editor REVIEW—I never miss a chance to get each member to subscribe to the REVIEW. I have only sent in 46 this year, but hope to do better.

I thank you very much for those cards and hope we can have the N. B. K. Ass'n meeting at St. Louis.

Yours,

J. F. DIEMER,

Sec'y Missouri Ass'n.

Marion, N. Y., Oct. 13, 1913.

BEE-KEEPERS' REVIEW:

Have disposed of my clover honey this week; had several inquiries from parties who saw it listed in REVIEW. Asked them 9c and never heard from any of them again. Sold through commission man for better than my asking price, also some to old customers at 10c. Wish I had enough steady customers to take all I produce. Very sincere thanks to REVIEW for listing just the same. Hope the policy will be continued; think it is fine for us small producers in out of the way places.

Very truly yours,

J. A. CRANE.

Ventura, Cal., Dec. 12, 1913.

MR. E. D. TOWNSEND,

Northstar, Mich.:

We are hoping for a wet winter and an old time honey season, as we have had short crops and failures for a number of years and it has been hard on the producer. We can not tell as yet as to what 1914 will be.

We are having fine weather and the hills and valleys are beginning to get green.

The gum trees are commencing to bloom at the coast. It is a dark, unpalatable honey, but will stimulate to strength.

Yours respectfully,

M. H. MENDLESON.

Chamung, Ill., Jan. 12th, 1914.

Editor REVIEW: Have sent in my \$1.50 to Secretary Stone to pay my dues in the State and National Association and a year's subscription to the REVIEW. I want to say this: I have received a number of letters wanting honey. One of the first letters received was from a store-keeper that thought my honey would sell good. He made me an offer and I sold him all I had left for 15c per pound for comb honey and the extracted at 40c per quart, put up in Mason fruit jars.

I have 65 colonies of bees and took 3,500 pounds comb honey and 600 pounds of extracted honey.

My bees are in the cellar and are in fine shape up to date. Please find enclosed \$1.00 for advertisement in the REVIEW. This is a great help to beekeepers and let us keep it going; it alone is well worth the entire expense. Have answered all letters received and ought to have written you before, but my little girl is very sick and I can hardly write at all. Thanking you for the favor, I remain

Yours truly,

JAY S. KENDALL.

(Friend Kendall: We are returning your dollar, as we make no charge for listing members' honey in that department. We are very glad, indeed, to hear that you had such good fortune as to sell out so readily, especially this year when some are still having trouble disposing of their crop.

We hope ere this the little girl is well, as we know something of sickness ourselves.—Ed.)

Editor REVIEW—Am sold out of honey. You may take my name off the list of those having honey for sale. Thanking you very heartily for your kind assistance, I remain, cordially yours,
JACOB WAHL, Lanesburo, Minn.

Editor REVIEW—Franklin (Mass.) “ate a little honey” too, December 15th. The Secretary-Treasurer had a special exhibit in one of the stores from her apiary, and also influenced dealers to observe the day by specially advertising their honey.
MRE. LESLIE A. M. STEWART.

The Review Debt Subscription List.

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we *must have* many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$23.00
J. M. Cutts, Montgomery, Ala.....	.25
A. W. Smith, Parksville, N. Y.....	.50
John C. Heins, Florissant, Mo.....	1.00
Edward F. Krehl, Northvale, N. J.....	1.50
E. A. Doty, Dixon, Iowa.....	.50
Jos. W. Leib, Columbus, Ohio.....	.50
F. A. Snell, Milledgeville, Ill.....	1.00
Chas. H. Burrows, Oran, N. Y.....	1.00
Bell E. Berryman, Central City, Neb.....	1.00
C. S. Watts, Monticello, Ill.....	1.00
Carl Grass, Hanna, Ind.....	1.00

We paid our \$42 interest due January 1, out of the General Fund, so all subscriptions to this fund will apply upon the \$700 principal. Remember, the above amount and all subscriptions received for the next 60 days will apply upon the principal. You who have not got your name upon the list kindly let your dollar come along by return mail so we can list you next month.

Address, with remittance, THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

Trade Notes.

This office is receiving many letters, asking what can be saved in supply bills by buying through the National.

To all such letters we have to answer, “Send in your order.”

After the hundreds of dollars the National has saved its members on tin and glass containers for honey, it would seem as if our

members would have implicit confidence that they would be treated as liberally in the future as in the past. I repeat, "Send in your order."

We are also asked to recommend some certain make of supplies. To this we have to answer that the National is very friendly to ALL manufacturers, consequently cannot recommend some particular make as more desirable than another.

What to DO if you are undecided upon the make of supplies to buy, is to look over the columns of the REVIEW and write all the supply manufacturers that are patronizing us and send to them and get their new 1914 price list of supplies, and after looking them over you ought not to have very much doubt in your mind which are making the kind suitable to your needs. We can assure you that those manufacturers who are advertising in the REVIEW at the present time are *the best in the world*, so you cannot make a mistake by patronizing them.

Remember, we are brokers. You send us your money, the same price you would pay others, and we will take the *cash* and buy your supplies for you *direct from the manufacturer*, and we assure you that with this way of dealing you will not have the bad debts to pay that are unavoidable with the credit system now in vogue with the jobber. Remember that we have no price to quote you in advance, you remitting the manufacturer's price quoted you in the list that you order from. Everything co-operative.

Buy Your Supplies in Car Lots.

In several localities, especially in the West, producers are "getting their heads together" and talking of making up a club order of a full car of supplies. There are many advantages in buying supplies by this method. In the first place you will get your supplies delivered to you about as clean and nice as when they left the factory. But the main object will be that they can be bought cheaper in car lots than in less number, and no small object in long shipments is the saving of a considerable in freight charges between car load rates and local rates. Notice, Western buyers, that if you buy your supplies in the East, that the freight rate will be equalized with those of Chicago, so in looking up freight rates simply ask for Chicago rate and you will have it very close. It takes some little time to get the several who will want supplies together and get them in line so as to be in shape to make the order, so it is none too soon now to begin operations if you want to receive your supplies in time to put them

up before the busy season; so "get busy" and get your order on the road as soon as possible. The better plan is to do your business through some bank. Select some one of your number who is most competent to take charge of the order. After making out the list of goods that is wanted by the different members, this list is handed to the one selected to do the ordering, he in turn will estimate what the goods will cost after allowing for freight charges, then the member will deposit said amount in the bank decided upon. We will order the car of goods shipped "to our order," drawing upon you for amount through the bank you designate when ordering, bill of lading attached. The bank pays for the goods and delivers the bill of lading to you when you can get the goods. This plan is not new, for most business is done in car lots on this same plan. The National is here to serve you. Make it more valuable to you this year than last by allowing them to do your buying for you. "The greatest good to the greatest number" we hope will always be the slogan of the National.

St. Louis is near the great honey-producing center of the West. A big "turn-out" is assured.

Classified Department.

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX.

FOR SALE.—Clover Comb and Extracted Honey. Address A. J. DIEBOLD, Seneca, Ill.

WANTED.—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th st., Philadelphia, Pa.

WANTED.—Comb, extracted honey and beeswax. R. A. BURNETT & Co., 173 So. Water St., Chicago.

FOR SALE.—5,000 lbs. extracted honey in 60-lb. cans; also 55 cases comb (mostly white clover). JOHN OLSON, Davis, Ill.

FOR SALE.—Car of Alfalfa Comb Honey, put up in double tier shipping cases, 24 sections to the case. J. C. MATHEWS, Montrose, Colo., Box 176.

FOR SALE.—Fine ripe raspberry and milkweed honey mixed. A fine blend in 60-pound cans. Price, 9c per pound. Sample, 5c. Address GEO. H. KIRKPATRICK, Rapid City, Mich.

EXTRACTED HONEY in 60-lb. cans. Three grades, good to very fine. A blend of white and sweet clover, at 8c to 9c and 10c per pound. Address A. MOTTAZ, Utica, Ill.

FOR SALE.—Choice, thick, well ripened extracted honey, of delicious flavor. Price \$12 per case of two 60-lb. cans. Write for prices when put up in 5 and 10-lb. pails. O. H. SCHMITT, Rt. No. 5, Bay City, Mich.

FOR SALE.—White Clover Honey, none better. In 10 lb. pails, six in a case, at \$6.50 per case; 5 lb. pails, 12 in a case, at \$7.00 per case; ½ lb. glass jars, 24 in a case, at \$2.80 per case. Sample, 4c. HENRY STEWART, Prophetstown, Ill.

FOR SALE.—Extra fine extracted clover honey. Have had no better in 25 years. Tiered up and well ripened before extracted. It is in new 60-lb. (net) square cans, two in a box. Price on request. DR. C. G. LUFT & SON, Fremont, Ohio.

HONEY FOR SALE—40 cases (two 60-lb. cans each). A blend of white and sweet clovers mostly and clovers and fall flowers. A very light amber, good quality; 9c and 8½c in large lots, 9½ and 9c four cases or less. ALFRED MOTTAZ, Utica, Ill.

IDAHO FALLS, IDAHO.—Comb honey all sold. We quote fancy white extracted in 60-lb. square tins at 7c. IDAHO HONEY PRODUCERS' ASSN., Idaho Falls, Idaho.

FOR SALE—15 tons Spanish Needle amber honey, good quality, in new 60-lb. cans. Write for price; state amount you want; sample, 10c. F. W. Leubeck, Route 2, Knox, Ind.

FOR SALE.—We have a car of Mesquite honey for sale at 6½c per pound, f. o. b. here. We also have two carloads of light amber alfalfa honey at 5½c, f. o. b. here. ARIZONA HONEY EXCHANGE, Tempe, Arizona.

FOR SALE—4,000 pounds fine quality Raspberry-Milkweed blend of honey at 8c per pound. Also 1,000 pounds light amber at 7c, f. o. b. here. All in new 60-pound cans, two in a case. Sample free. P. W. SOWINSKI, Bellaire, Mich.

AMBER HONEY FOR SALE.—I have fifty cases of Buckwheat Golden Rod Honey of a dark golden color, a very good honey, and offer at the following prices: 1 case (2 60-lb. cans) @ \$8.40; 10-case lots @ \$8.25; 25-case lots @ \$8.00. If interested ask for sample. IRA D. BARTLETT, East Jordan, Mich.

BEEES AND QUEENS.

BEEES by the pound, without comb, \$1.25; ½ lb., 75c; queen, Italian, \$1.00. ROSEDALE APIARIES, Big Bend, La.

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c. E. E. MOTT, Glenwood, Mich.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on nuclei for May delivery. We have Moore's strain of Leather-colored Italians. GGDEN BEE N HONEY Co., Ogden, Utah.

QUEENS by return mail. Tested, \$1.00 each; untested, 75c; \$7.00 per doz. Three-band Italians only. No disease, and satisfaction guaranteed. J. N. K. SHAW & Co., Loreanville, La. (Iberia, Pa.)

President Gates is leaving no "stone unturned" to make the St. Louis program the "strongest ever." You will miss a "treat" if you fail to attend.

We predict the "best ever" at St. Louis.

WANTED—To buy 50 to 100 colonies of bees. Would prefer in 8-frame L. hive. Address J. E. HEBERT, Bad Axe, Mich.

FOR SALE.—Three-banded and Golden Italian queens and bees that are gentle, prolific and the best of honey getters. Also bees by the pound and half pound, and nuclei. Circular on request. L. & H. APIARIES, Clarkston, Mich.

MISCELLANEOUS.

FOR SALE—Motor Cycle. Telephones. Address E. PRESSLER, 1726 Armitage Ave., Chicago, Ill.

FOR SALE—Rufus-red Belgian Hares. Price list free. HARVEY L. STUMB, Richland Center, Pa.

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FOR SALE—A blend of White and Alsike clover seed; also light amber Aster honey. N. O. WALKER, Franklin, Tenn.

BEE-KEEPERS—If you are interested in Double-walled Hives, write for our free catalogue. THE L. F. HOWDEN MFG. CO., Fillmore, N. J.

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SWEET CLOVER SEED FOR SALE—We have at Syracuse, N. Y., 1,600 pounds White and Yellow sweet clover seed mixed, about half and half each. It is unhulled and we can offer it in 50 to 100 pound lots at the extremely low price of 10c per pound, in sacks, on board car at Syracuse. The yellow variety blooms about two weeks earlier than the white, so the two sown together would likely make the honey flow that much longer. We have in Boulder, Colorado, 175 pounds of the white variety, hulled, that contains likely 2% of weed seed. We quote it at 15c per pound in lots of 50 to 100 pounds. We have in Cornell, Ill., 300 pounds of the white variety of seed containing likely 2% of weed seed. This we can sell you at 15c per pound in car there. This is hulled seed, also. Address with remittance, NATIONAL BEEKEEPERS' ASS'N., Northstar, Michigan.

FOR SALE—Root's Goods and Dadant's Foundation at factory prices. SPENCER APIARIES CO., Nordhoff, Calif.

FOR SALE.—A few trios of Buff Minorcas, extra good layers. Also want Hershisser Wax Press. CLYDE GODFREY, R. F. D. 9, Jonesville, Mich.

WANT TO SEND YOU our catalog and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

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A RARE OPPORTUNITY to start in the bee business, with the sale end of the business all worked out. It consists of four yards of bees; 140 colonies all told. One of those yards contain very carefully bred Carniolan bees and some very fine breeding queens of this race. A Carniolan trade that took 500 queens last summer. Two and a half acres land mostly set to small fruit; one horse, harness and wagon; one Overland automobile, model 40, with body to set on for carting bee fixtures to and from yards; one honey packing house 14x28 feet, with full equipment for packing honey in glass. A honey business that takes 2,000 dozen during the season. A mail order trade that takes 10,000 lbs. honey in tins, shipped direct for family use. Full equipment for running these bees for extracted honey. This splendid opportunity is open in New Jersey. Address CARNIOLAN, care Bee-Keepers' Review, Northstar, Michigan.

The Central West has not had a National Convention in some years. This should be a "bumper." All eyes are now turned toward St. Louis.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

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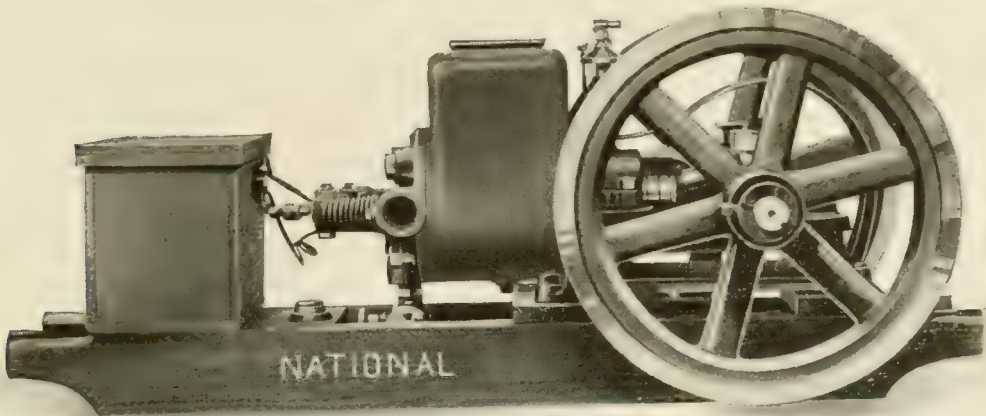
Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," for their letter heads, envelopes or circulars, can be furnished with them for 50c. each, post-paid. Address

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The National will again furnish their members with that fine seed of the white variety of sweet clover that we furnished a year ago from Colorado. This is the variety that furnishes such large crops of sweet clover honey in the West. The same member who furnished it a year ago will furnish it again this year, and we have made arrangements so we can furnish it at 15c per pound in lots of 10 pounds to 99 pounds; 100 pounds or more at \$13.00 per 100 pounds. This price is f. o. b. in Colorado. Order a quantity lot and have it shipped by freight to save transportation charges. Let us book your order for delivery as soon as the crop is harvested, for our stock is limited and those who wait will not likely get seed.

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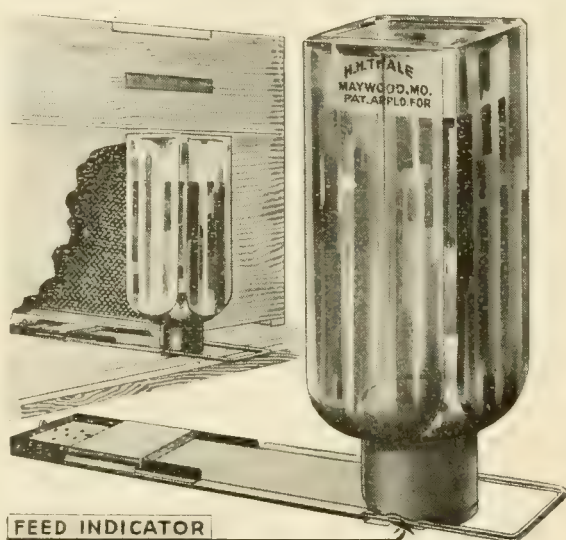
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Send for feeder circular and bee-supply catalog. I carry a full line of Lewis Beeswax and Dadant's Foundation. One of my Vacuum Bee Feeders complete with two bottles FREE with every ten-dollar order. Send me a list of your wants—it is no trouble to answer letters.

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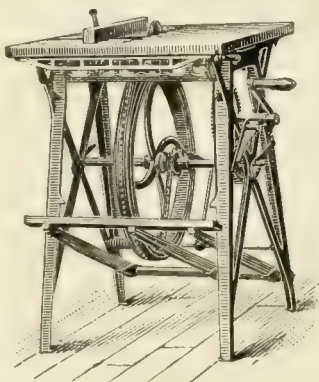
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Thin Brood per lb.	11	12	13	15	16
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Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.

Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Members kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "National" also, put your mark on the packages so your wax can be recognized and mail the bill of lading also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Mfg. Co., Falconer, N. Y. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE NATIONAL BEE-KEEPERS' ASSOCIATION
NORTHSTAR, MICHIGAN.

Pack your wax in double sacks. Use no paper or other packing.

Friction Top Honey Pails and Cans



The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx. Capacity	Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2 lb. Can.....		\$2.25	\$2.15	\$20.00
2½ lb. Can.....		2.75	2.60	24.00
3 lb. Can.....		3.00	2.85	28.00
5 lb. Pail.....	\$5.00	4.75	4.50	42.50
6 lb. Pail.....	5.25	5.00	4.75	45.00
10 lb. Pail.....	7.00	6.50	6.25	60.00
12 lb. Pail.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gollan square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb. Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

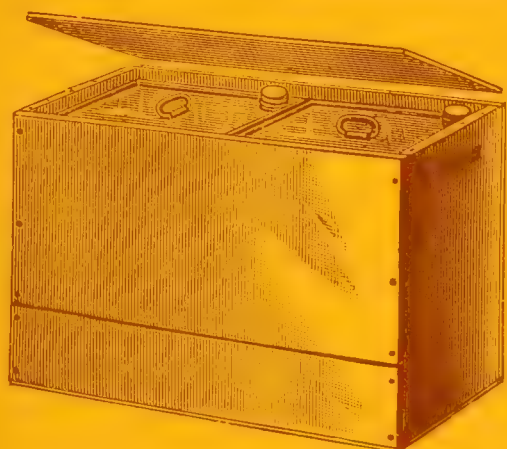
Address all orders to

The National Bee - Keepers' Association
Northstar, Michigan

Tin Honey Containers of Quality, for National Members

Of standard size and guaranteed to be the best to be had at any price.

Specifications of the 60-lb. Can.



Five-gallon Square, Round-Cornered Cans, $9\frac{3}{8}$ " square by $13\frac{7}{8}$ " high, with wire handle, paneled sides and $1\frac{3}{4}$ " Cork-lined Screw Cap.

Above cans crated 50 cans in a crate, **20c** each.

Above cans cased singly with case having $\frac{7}{8}$ " ends and $\frac{3}{8}$ " sides, tops and bottoms, **33c** each.

Above Cans cased in pairs with case having $\frac{7}{8}$ " end and $\frac{3}{8}$ " sides, tops and bottoms. **60c** each

Above Cans cased in pairs as above, in lots of 250 or more cases. **\$57** per 100 cases

Above Cans in car lots of 900 to 1,000 cases. . **\$56** per 100 cases

The above 5-gallon cans with 8" screw cap, add 11c per case of two cans. Add 5c for cans cased singly, if wanted with 8" screw cap.

One gallon square round-cornered flat top syrup cans, with screw caps. The finest can in the world to sell honey direct to the consumer in, and we have had the manufacturers make us some wooden re-shipping cases, the same as those on the regular 60-lb. honey cans, so they will go by freight the same as the larger cans. Above gallon cans in wooden case, 6 cans in a case. . **60c** per case
10 cans in a case. **95c** per case

We quote them in crates of 50, at **\$7.00** per hundred cans.

Address all orders to
National Bee-Keepers' Association,
NORTHSTAR, MICHIGAN

Gleanings in Bee Culture

==FOR 1914==

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake beekeeper whether he has but one colony, a small suburban apiary, or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY.

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT.

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES.

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance, and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING.—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES.—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies, and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS.

—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho, and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1—WINTERING.—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14, which experiments will be published in this number. We shall also give our own experience summed up as to the feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you can not afford to miss such a wealth of information as the subscription price, \$1.00, will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly



MAR.
1914

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NORTHSTAR,
MICHIGAN

ONE DOLLAR PER YEAR

Expiration Notice!

FRIENDS:

In looking over the list of those who have not renewed their subscription to the REVIEW for 1914, we find several whom we know personally, and think they still want the REVIEW for 1914, but for some reason have not notified this office. Now, friends, we do not want to urge the REVIEW onto you if you do not want it. On the other hand, if you DO want it, we would like to know it. Now we are going to ask you to do us a little favor. We are going to ask you to do one of three things, and this favor will not take more than five minutes of your valuable time and will be appreciated very much at this office. First: We are going to ask you again to send in your dollar for 1914. It is but little and we are very sure you will get your money's worth many times during the season. Second: If you should not have the money to spare at this time and want us to continue sending the REVIEW, we will be pleased to do so, you paying some time later, perhaps next Fall. Third: If you do not want the REVIEW under either of the above propositions, will you kindly let us know by return mail and the REVIEW will stop coming immediately.

Thus far you have not missed a number, as we have continued sending the REVIEW since December, thinking that every mail will bring your renewal. Most of the friends have renewed their subscriptions to the REVIEW for 1914, but we do not like to lose a single one and some few have not renewed, neither have they signified their intention of discontinuing the REVIEW. Even if you expect to have the money to send in a couple of weeks, drop the card just the same, then you will not miss a number. Should you decide not to renew your subscription to the REVIEW, for 1914, there will be no charge for the three months you have received it since your subscription run out. This ought to be fair, hadn't it?

Kindly do this for us today, before you forget it, and oblige us.



A Two-Story Observation Hive in one of the Colleges in Grand Rapids, Mich. Pearce Method. (*See next page.*)

Notice Change in Secretary.

The new Secretary of the National Bee-Keepers' Association elected at St. Louis is Mr. Geo. W. Williams, Redkey, Ind., to whom all correspondence pertaining to the secretary's work should now be addressed.

The Bee-Keepers' Review

Established in 1888 by the late W. Z. Hutchinson.

OFFICIAL ORGAN OF THE
NATIONAL BEE-KEEPERS' ASSOCIATION
AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, NORTHSTAR, MICH.
WESLEY FOSTER, Assistant Editor, BOULDER, COLO.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII.

NORTHSTAR, MICHIGAN, MARCH 1, 1914

No. 3

Bees in Buildings Above Ground

By J. A. PEARCE, Grand Rapids, Mich.

Author of Pearce Method of Bee-keeping.

(Continued from February issue.)

I HAVE now told the outline of bees in upper rooms in the cities or farmhouses where only a few are to be kept, but for the big bee-keeper this method opens far greater possibilities than for the other fellow, as it will greatly lessen his labor and increase his profits and enable him to produce comb honey without swarming, and should do away with foul brood to a great extent, as I look upon extracted honey production as being at the bottom of the spread of foul brood, and when the keeper of outyards would leave his bees and lock up his house he would have a sense of security from storms and marauders that he does not now possess, so I will briefly describe a house or shell for the bees where they will be safe at all times and where they can be manipulated with pleasure in almost all kinds of weather.

I would build such a house seven feet wide and seven feet high and as long as you like. All you need for sills, plates and studding is 2x4 scantling. The studding I would put 32 inches from centre to centre for various reasons. Then you can figure two swarms for every 32 inches, as you will set a hive on each side. Then build a shelf on each side 20 inches wide and two inches high. This will leave an alley way about three feet between the shelves. In this you could build a rolling table to work your bees on. I am using a light

dry goods box, but a rolling table would pay for a longer house. This table should be just the level of the shelves. The sidewalls and roof could be made of dressed hemlock and roofing paper or shiplap siding for sides, as you like. The cost is nearly the same. The window should be a single light, about 16x16, cut one-half inch short at the top or bottom. It could be reversed, but the bees go out freer at the bottom in all kinds of weather. For winter we stop this cut up. The window should be encased in a little sash just the thickness of your siding lumber, then put a casing or binding on the outside, letting it project over the edges of the window hole and set your window in against this and then a little button on each side of the window is all you need, and to take out or put in the window you only turn a button.

The building should be set north and south, the body way, so your bees will fly east and west. The building should set on level land and if your land is not level I would not build the houses too long or scrape down to a level, as this would not amount to much, as the house is so narrow. The bracing for the shelves we attach to the studding and tack a piece of refuse board to the studding and your brace will nail straight onto the board your shelves rest on.



Exterior view of Poultry House where bees are kept. The numbers seen are near the hive entrances.

(For interior view see frontispiece in February Review)

Then put a piece of 2x4 flatwise just above the opening for the bees to fly out which should be about 4 inches up and down and the whole length of the house. This will then leave a 4 inch pocket and leave your hive entrance in 4 inches from the outside wall, thus making it safe at all times from all kinds of weather. Build your house strong, anchor it down so it can never blow away or blow over. Remember, you are building it for a lifetime and so you can afford to do it well and have everything right and strong. The price will be around \$2.00 per hive, or about the cost of a so called protection hive. You would have to get from 10 to 15 pounds extra of honey to pay for this building in one year, but if you will try it and test it you will find you will get very much more than that. A man here who had part of his bees outside and part in a house, noted a big difference in favor of those inside, and as between his single and his double hives, the single gave him about 30 pounds comb honey each, while the double ones gave 100.

In conclusion, let me admonish you that a single hive is not large enough or the right shape to hold enough winter stores, neither is it large enough to hold all the brood that a queen will furnish up to the honey flow.

Some Important Things about our Double Hives and Buildings for Bees.

January the 27th, 1914, was the warmest January day in the history of our weather service here. The bees had a little fly-out, the first they have had since closing in.

We went through to see that all entrances were clear of dead bees and cappings, which is a very important matter to attend to. Last fall we had two light swarms that we bought which were queenless, so I gave them queens by the smoke method, but only one queen lived. It was getting late, so I put this queenless lot of bees, which were in three hive bodies, above the hives with the newly introduced queen, which were in two ordinary hive bodies. This made a very tall hive of five bodies high, all single walls.

This little lot of bees in the queenless part were clustered in the top small hive. It was my intention that this small lot of bees would go below and unite with the colony with the young queen. I would shake them below the first warm day that came, but none came, and this little lot of bees just staid up where they were and ate up through to the top and bumped their heads against the boards and died, and they always will where there is not stores enough above them to carry them through the cold weather. There were stores enough below them and above the bottom lot with the queen to have lasted a swarm of bees for two years, but it was not available to these bees above. The cluster below we found all right with the queen we had given them, so we removed the three top bodies and covered this lower cluster in two bodies with carpets and top cover for another

spell of winter which will pretty surely come, and I feel quite sure they will survive, although light in bees, and I regret that this above clump of bees could not have gone below and joined them, but late weather conditions prevented. The upper bunch was nicely clustered, with their heads all pointed upwards and with their wings all locked over each other as shingles on a roof, so if they could have had six inches more honey above them they would have weathered the winter. An important lesson that bee-men should learn is that bees between two combs only travel upward during cold weather. They could not stand on their heads for three or four months or lie on their sides, so any stores to be available for them during the cold weather must be above them. Bees left to themselves always store it, but where they are in a single shallow hive body, they are not provided with adequate storage capacity above them to carry stores to make it safe and sure to get them through our severe winters, and I wonder more and more that so many bees get through in those shallow hives. But it is bad enough when, only a few years ago, 75% of all the bees in the northern states died, the loss being millions.

In discussing the wintering question with George E. Hilton, our famous brother bee-keeper, he said that nine-tenths of the bees that have died have died of starvation, nearly all of which might have been saved had the bees been in double hives so as to have allowed storage room above them where it would be available for them during cold weather.

Now what are the lessons we learned from this winter examination made possible by having the bees in a house? The first is that the upper cluster died because there were no more stores above them, but abundance below them, and that the other cluster down in the bottom of this five-story hive were all right and would have been all right till spring, because they had plenty of stores above them to eat up into notwithstanding this enormous space above them, and that they were only in single-walled hives and had gone through three or four spells of near zero weather. Our double snug down packers would have expected to have found them all dead, but I hope and fully expect that this light cluster will weather February and March as well as they have gone through the past ninety days, because we saw to it that they had ample good sealed stores to eat up into. We then examined a large fine colony in double hives up in the loft, as we feared a mouse had gotten in. There was no mouse, but we took out all the frames and found that they had already started brood, so there will be no spring dwindling there, as there will be young bees coming out soon after Valentine's day, and it will get to be an enormous swarm by the time the honey harvest gets here, so they would do some business.

(To be continued.)

Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordelia, Ga.

From 350 Colonies in Four Yards to 550 in Seven Yards.

THE much cherished and long looked-for time of my life had now come when I could be in business for myself and in which my whole life was absorbed. Here the dreams of my life began to materialize and the many "air castles" I had built began to appear as real. My experiences had been ripened some and in every particular I was ready for the task. Well, no one but those who have had empty, hungry lives know how I took in the whole situation and went about it. I threw up my job at the shop on the first of the year with the disapproval of the general manager, who stated that I was too much of a mechanical genius and could command too great wages to let go and devote my entire time to such a small, frivolous matter or business as bee-keeping; that I was letting my mind get the better of me. He followed me up thus for several weeks and, lastly, the whole town joined in with him, and finally my wife threw the same thing in my face, and all begged me to go back to the shop. I assured them that I was sane and making no mistake and thus I persisted, and the result was I was branded with indifference and looked upon by all as not being really sane. It remained thus for nearly two years, when I vindicated myself by passing through my town seated on my wagon with a long chain of drays and wagons behind loaded with honey which I removed from apiaries scattered about over the surrounding country. This procession was hailed by the people and stopped in the middle of the town, where the mystery of it was fully made known to all, and from that day to this I have been recognized as one among the best citizens of my town.

I mention this, dear reader, for no other purpose but to put you on notice that if you take up our business in a way to attain a great success you will have to encounter to some extent the same hindrance, and when you do, make the best of it, for here is where many have turned back or perhaps barely held their own.

Supplies Were Purchased in Ample Time.

But going back for a starting point for the year's work, I first bought a little over \$800 worth of supplies, consisting of 200 covers, 200 bottoms, 150 hive bodies with frames for increase, 500 supers with shallow frames, and balance in comb foundation. This was all put in readiness for the season in ample time.

By this time I had been through every "nook and crook" in the country for 25 or 30 miles around in search of bee pasture and apiary

sites, etc., and I knew where every colony of bees were in this territory and the owner, and whether or not they could be bought.

There was only one man in the whole territory who kept bees in modern hives and he was the most wealthy man in all the country and did not want to sell his bees, which, in all, were 40 colonies. I said to myself, "I will buy your bees at some time in the near future," (and sure enough I closed the deal for them the next year).

Three More Bee-Yards Are Established.

I decided to establish three more apiaries at the best and most convenient sites from my home and other yards. On two of these sites there were already located box hive apiaries, one consisting of 43 colonies. I could buy these bees at a little better than \$1.00 per colony, with the privilege of establishing permanent apiaries there, and I closed the deal. There were several bunches of bees within a few miles of these and another apiary site I had picked out and asked for.

I bought and gathered up and placed them at nearest site, doing all my moving at night to avoid danger of bees escaping from the old, crude box hives. I fastened the bees up late in the afternoon when they were all in by smoking them at the bottom of the hives and setting the mouth of the hives on a piece of burlap placed on the level ground and fastened around the hives by drawing it up on all four sides and tacking pieces of leather cut as long as the sides of the hives were wide across all four sides about six inches from the bottoms. All other openings were closed by packing them well with soft rags and all loose covers were tacked on. Then they were loaded on the wagon and hauled to the apiary sites and placed where they were expected to remain. All told, there were a few over a hundred of these colonies, and for convenience in transferring they were set right on the ground.

When I was ready to move these bees I added to my business for the first time a good horse and wagon and a pair of good bolster springs, for up to this time it was most economical to have my necessary hauling done. As will be seen all the way through, my ambition was to establish a great bee business with the least possible amount of expense, in the most economical manner. From the two most remote yards from my home yard I moved 50 colonies of bees to these three new yards, making about 50 colonies all told in each of the new yards. The two yards I moved bees from were where I expected to make the most increase, which would about cure the bees of swarming at these yards, and I would not have to visit them very often during the season, for I was to do all the apiary work myself.

To prepare the bees for moving I made 25 wire covers out of galvanized gauze wire, cut in pieces as wide as the hives and two

inches longer than the hives. Then I cut two pieces 1x4 two inches longer than the hive and two pieces of soft, straight grain 1x1 cut as long as the hive was wide. On the two 1x4 pieces I tacked the piece of gauze wire with large head tacks well even on the outer edge all around, then on this I nailed the two pieces of 1x1 across each end with large nails so they could be clinched on the other side to hold the frame together well, and nailed them on even on the outside, pulling the frame apart well so as to keep the wire tight. Then I turned the frame over and clinched the nails and nailed on a strip of soft material about $\frac{1}{2}$ "x1" on the one-by-one strip between the two side pieces, which were the 1x4 pieces. Thus all the covers were made and when placed on the hives made close-fitting covers and strong ones, too, and to fasten them on all that was necessary was to drive in two nails, one on either side about midway of the cover into the sides of the hives. When the bees were placed the screens could be pried up a little with a hive tool and pulled up from the end. The end strips hold the screens on one way and only a small nail will safely hold them on the other way. On top of hives thus covered more hives can be placed or anything on there is in no danger of tearing up the wire. I mention this item of convenience because it plays a very important part in establishing a large bee business and bees can be moved safely any time of the year under such screens.

As soon as the bees were moved I built a large workshop at my home apiary and used the old one solely to pack honey in, etc. All the honey from the other apiaries was hauled in and packed here, for it was found more economical to do it than to do this at each yard.

Well, my spring work went on in the usual manner as I have previously described, transferring those bees or, rather, letting them do it by my method. [Mr. Wilder's method of transferring is repeated on this page, as no cut was available to illustrate it when given earlier in the series.—Ed.] This controlled their swarming and as a result I harvested a good crop of honey from them.

The combs I had built the previous year came in well in transferring and making the increase. I closed the season with a great success; yes, far greater than I expected.

Transferring Bees From Box Hives.

By J. J. WILDER, Cordele, Ga.

TRANSFERRING bees will be the order of the day among the beginners of the south. By the time this article is read it will be the opportune time in most locations, and we give the simplest, easiest and most sure plan that we have ever tried.

The one and one-half story dovetail hives must be prepared, in the usual manner, one for each colony to be transferred. Full sheets of foundation in the brood frames are better, but starters will do. Cut No. 1 shows the box hive in readiness for the modern one, which is done by turning it down on its side or edge, so the comb will be about straight up and down, then with an ax split the top side up in one and two-inch strips. Then remove them one by one carefully, so as not to break up the comb. Set the prepared hives over the greatest cluster of bees, and place a plank over the portion of the old hive the new one does not cover. See cut.



Bees Transferring Themselves a la Wilder.

hive the queen has established her brood nest there, and the bees have transferred themselves.

At the close of the season the old hive can be moved, the new one set down on its regular bottom, and the old comb rendered into wax. This plan cures the bees of the swarming fever for the season, and they will store more honey than the newly hived swarms will.

I must not close without stating that this is a very important time in the bee business, and the bees should have close attention. A super should be placed on all strong colonies, and more should be in readiness. As soon as the bees get started well on a super it

The bees in the box hive should be well smoked before the hive is turned down, and it should not be moved, just turned down on the old stand. If the old hive has no comb in the top, caused by being robbed last season, it should be filled with straw or shavings and the modern hive set over the part where the comb is, and a board laid over the straw. This will keep the bees from building any more comb in the old hive, and if there is comb and honey in the top of the old hive, the bees will remove it, if the cover is pried off the hive just a little along during the season, and by the first of the summer it can be completely removed, leaving both ends of the old hive open. By this time the bees have moved all the honey up into the new

should be raised and another one placed under it, so as to pull the bees out as much as possible at the beginning of the season.

It is a fact that the average bee-keeper in the south only has one super for each colony when he should have not less than three, and it is not too late to order more now.

Wintering Bees and Some Other Things

By C. F. SMITH, Cheboygan, Mich., President N. B. K. A.

IT is certainly surprising and, I should think, confusing to the mind of the beginner, to read the conflicting statements of men, especially of long experience in a northern latitude, on this wintering problem. Mr. Pearse's statement in January REVIEW, "To leave them (the bees) out in a snowdrift, exposed to all the storms that blow, is equally as bad as putting them down cellar for four or five months among the dead and dying with no chance for a flight until spring," is in direct variance with my experience, covering as it does thirty-seven winters. That experience says that the *best* place to winter bees (in single-walled hives) is in an all underground cellar, made as warm as possible, without artificial heat. In such a cellar the temperature will not vary much either way from 50°. If they have plenty of food (ripe honey or syrup) and good queens and are put in right, not a colony should be lost.

Look after the feeding and queens in September, or as soon as the fall flow is over. In the latitude of central Michigan, they should be put in cellar just after the first fall of snow after the 25th of October, using the snow to stop up the entrances. Leave all hive covers out, covering the bees with one or two thicknesses of burlap, or any other cloth or blanket not gummed. The windows must be blinded thoroughly to exclude every ray of light and retain heat. No matter whether the cellar is wet or dry, leave them in 'till the first bloom appears, which in my case means five to six months.

Bees cannot stand this long confinement under gummed or tight covers, for the reason that the moisture from the bees (not the cellar) condenses and falls back on the bees, causing great discomfort, disease, death and mouldy combs. It took me fifteen years and cost me several hundred dollars to find this out. No regular ventilator is needed, though the air might be changed nights during warm spells through the winter, and especially in April. A variation of 25° does no harm; if too low they cluster closely, and if it gets to 60 or 80° they simply spread—even cluster out, with no harm or even uneasiness.

I fully solved the wintering problem and covered this ground exhaustively, ten years ago, (see Jan. REVIEW, 1904), and have spoken

of it in many conventions since, and still, in passing through the country in the winter time I notice but a few piles of hive covers in the bee-yards.

The heavy double-walled hives: We simply rip off the gummed cloths, replace with old rat-chewed gunny-sacks and fill in with chaff or dry rotten sawdust, lay up a rail-fence around to stop the driven snow, which we remove in the spring. I am asked: "Don't you suppose bees know their business when they are sealing up?" Yes, in their native (warm) country and in their wild state among rocks, caves and trees, but not on the Straits of Mackinaw. There were no bees here when I came here in 1885, and the bees that get away to the woods soon learn to their sorrow that they are not in their native state.

For fifteen years wintering bees was our great stumbling block. Now it is the least of our troubles.

Two great problems confront us now. We have our two-room honey-house—one warm room where the shallow extracting supers are piled—and we can extract when we get ready, and no bees to bother. But—

Problem 1. We want a jacketed settling tank that will hold 1,000 lbs. of honey and a barrel or two of water, so no matter what we put up our honey in we can do so at a temperature of 125°. How should we heat it? Shall we need a strainer? Where placed, top, or at the bottom?

Problem 2: How can we extracted honey producers get together on grades and prices? I don't want to run up against the Sherman anti-trust law, but it does not seem to me that we are getting all the benefits that an association should have along the selling line. I have asked that this subject be discussed at our Northern Bee-Keepers' Convention, held in Petoskey, March 10th and 11th. We are going to have a rousing meeting, and it will pay bee-keepers to attend.

EDITORIAL CORNER

The Northern Michigan Convention at Petoskey the 10th and 11th of this month, and at Lake City, Michigan, the day following, the 12th, promise to be well worth attending. Those who have the management write us that a good program is in course of preparation, that premiums will be given at the Petoskey meeting for the best honey and wax, and that a good time in general is expected. Headquarters at the Cushman House. Write Ira D. Bartlett, East Jordan, Mich., for program and further information.

The great National meeting of 1914, at St. Louis, is now history. The meeting was not largely attended, but was of excellent quality. The Canadians were represented by Prof. Morley Pettit, Provincial Apiarist, Guelph, Ont., and Prof. F. W. L. Sladen, Experimental Farm, Ottawa. Delegates to the number of fourteen, having thirty-six votes, were present. As each delegate was allowed one vote for each fifty members, or fraction thereof, the reader would naturally presume that the fourteen delegates represented 1,800 members, but such is not the case, as the fractional feature would reduce the number somewhat. There was a lively "scrap" on at all business sessions, as several important questions were being "thrashed out," and the different delegates worked to carry out their and the Association ideas as to the future policy of the National Association. No one can say but what each delegate worked for the policy he thought best to further the interests of the Association, and when it was all over the very best of feeling was expressed.

Forty-five thousand booklets, "The Use of Honey in Cooking," were sent out by Chairman France, bought with the balance of the League Fund. They went gratis to members by paying postage. Many more applications for booklets were received than the \$604 fund would buy, and Mr. France reports under date of January 2nd, that all postage received since the supply of booklets was exhausted had now been returned.

This is the last chapter of what once promised to be one of the most beneficial moves ever inaugurated among honey producing interests. The fund originally was some more than \$1,400, subscribed principally by manufacturers and dealers in bee supplies, the producer—although the one primarily interested—not responding.

For the benefit of the younger readers of the REVIEW, it may be well to explain that the "League Fund" was originally intended for advertising purposes, to popularize honey. If we could have ten or fifteen thousand dollars annually for this purpose, then turn this money over to those in the advertising business who make this line of advertising their specialty, ere long we would not be able to supply the demand that this popularizing would bring forth. Had this "scheme" worked out, and the desired amount of money been subscribed, there is no doubt in the mind of the writer but what producers would now be realizing handsomely for their money invested, by a better demand for their honey at an advance over the price now realized.

The REVIEW is very fortunate in securing many practical papers touching upon the scientific side of bee culture contributed at the National, which will be published in the columns of the REVIEW during the next few months.

We in Michigan have had a very mild Fall. Up to December 22nd we would rather our bees had been left upon their summer stands, even in single walled hives, than be in a cellar, as about two-thirds of ours are. Since the above date we have had weather more favorable for bees wintering in a cellar. At the present writing, January 14th, the weather has the appearance of being more favorable to indoor wintered bees than those outside. As a whole, those bees packed outside in winter cases have shared rather better to date than those in the cellar. The temperature in our big cellar in Charlevoix County has been around 52 degrees most of the Fall during the warmer portion, but is likely some lower this zero weather. Our 92 swarms in the cellar under my son's dwelling house seem to be wintering well with a temperature of 40 degrees. These here at Northstar have mostly fine white honey to winter upon, while those in Charlevoix County have a considerable aster honey gathered during the fine weather last September. Those last mentioned bees may come out next Spring somewhat weakened physically as well as in numbers.

Later, Feb. 16th: The first half of February has been genuine winter weather, a part of the time the temperature being 20° F. below zero. February has been a month decidedly favorable for indoor wintering of bees; cold, blustery and unfavorable for outside bees unless they are well packed and sheltered from outside elements. We now look for our cellar wintered bees to come out best, other conditions being the same. Of course, we will know more about it in the spring, but this is as it looks to the editor at present. We hope they will all come through in good shape. We will let you know later.

Some Things That Were Said and Done at the Michigan State Meet at Detroit in December.

(Continued from February number.)

Some bee-keeper supplies are sold their members at a discount from regular dealers' price; 2,500 queens were sold their members last season at a discount from regular prices. Had calls for more than they could supply. Price of honey not high, according to food value. Flavor in honey is the main factor in creating a demand. Honey in air-tight packages retains its flavor much better than if left open. Hard to liquify honey without hurting its flavor. Members of the Ontario association are secured by continual advertising, many circulars being sent out to bee-keepers. More than 10,000 application blanks sent out, asking "Are you a member of the Ontario Association?" If not, by filling out the blank and enclosing a dollar, they would be made a member for a year and get the official organ, *The Canadian Beekeeper*, one year without extra charge.

Getting down to business: Bee-keepers' supplies are furnished the members at 15% discount, shipped to the local Secretary. Eight

to ten dollars saved on 100 cases of 60-pound tin cans. Looking toward co-operation in the sale of members' honey. Difficulty seems to be to get the members to co-operate. Thus far members left to communicate direct with dealers in the sale of their honey. Co-operation is a large question, not thoroughly solved yet. The inspector of apiaries is a very important factor in the education of a certain class of bee-keepers. The Canadian National furnished their members breeding queens at a reduction, bought through their local secretaries. Thus far it was not a matter of selling queens, but of buying enough to supply the demand. Bee institutes in connection with Farmers' Institutes were held each two weeks, twenty bee-keepers attending each meeting on the average, some driving twenty miles to attend. Fifty-nine demonstrations were held during last summer at different bee yards, with an average attendance of 32. Prof. Pettit recommended that we visit our neighbor; many valuable things are learned this way. An automobile is an excellent vehicle to do this with. Low price of honey caused by lack of educating the public of its value. The price of honey low according to food value. Flavor in honey is the main factor in its sale. This is retained by keeping it in air-tight receptacles. Hard to liquify honey and retain the aroma and flavor. Speaking of organizing a bee-keepers' association, Prof. Pettit said in part: Continued advertising and the sending out of thousands of circulars had brought their association up from a very small number to over 1,400 members and this during the last two years. One of the circulars sent out asked the bee-keeper: "Are you a member of the Ontario Bee-Keepers' Association? If not, why not?" A stamped envelope was enclosed with each circular and a blank to fill in the would-be member's name, and requesting that one dollar membership fee be inclosed and mailed to the Secretary. More than 10,000 of these application blanks were sent out to prospective members. Advertising honey something to be taken up later.

Mr. David Running, Fillion, Mich., described his cellar for wintering bees, where he has wintered without loss for several years. As we have an article from him, also illustrations to describe his cellar, we will pass this over until some future number.

One feature he mentioned that will likely be of value is his method of remelting honey in 60-pound tin cans. His Townsend uncapping tank of galvanized steel is eight feet long and two feet wide. Fourteen 60-pound cans are remelted at a time in this tank. A wooden frame is placed in the bottom of the tank to lift the cans up off the bottom of the tank, so the water which surrounds them can circulate under the cans as well as up the sides. The whole is heated with a three-burner gasoline stove.

"How to Manage Five Hundred Colonies for Extracted Honey With the Least Labor," by Mr. Dadant, was listened to attentively.

Their bees are mostly in out-yards, some little distance from the home, and are wintered on their summer stands. With their large 10-frame Quinby hive of a size of about 13 Langstroth frames, not much fall feeding is necessary.

A trip in the Fall to pack the bees for Winter, then another one in the Spring to unpack, covers a considerable portion of the year's work. For an upper story comb to extract from they use a frame different from the brood frame, it being only six inches deep. Their mode of leasing ground for the bee yard is unique and of their own originality, for they give a fourth of the crop for this rent. At first thought this rent would seem exorbitant, but the landlord is interested in the bees and crop and takes extra care, and is presumed to hive a portion of the 5% of swarms they have each year. Then the men and teams are taken care of while at work at the yard without additional cost. This liberal trait is a characteristic of the Dadants and has gone a long ways toward building up their great business in comb foundations. The most of the work of driving to the yards during Summer is done with a Ford automobile, a couple of men visiting several yards each day to give room and make up winter loss as the case may be. At extracting time, after the crop of white honey is all upon the hives, two men go ahead in the auto and have everything ready by the time the team gets there with the extractor and cans to hold the honey.

"Migratory Bee-Keeping," by Mr. H. C. Ahlers, of Wisconsin, Mr. Ahlers not being present the secretary read a paper sent in which we hope to get space to publish in the near future.

"Relation of the Bee-Keeper to the Fruit Grower," by Prof. R. H. Pettit, East Lansing, Mich., was illustrated by lantern slides. This subject is of so much importance that we are going to ask Prof. Pettit to write it up in detail for the pages of the REVIEW.

"Imagination as Applied to the Bee Business," by Secretary of the National, E. B. Tyrrell. He dwelt upon some of the possibilities yet to be developed in bee-keeping. One thought was that of building up cars of bees in the South, shipping them North at the opening of the clover flow, work them through the season, then extract *all* their honey, melt up the combs into wax, then have the hives built collapsable, so they could be shipped back South to be refilled again. Another "scheme" would be to sell the bees in the fall, after taking the crop. It might be practical to ship them North for the white honey flow, then return them South to winter and either take a spring crop of honey South, or double the number of bees, as one thought best.

Mr. J. Pomeroy Munson, Grand Rapids, Mich., President Michigan State Horticultural Association, spoke of the benefit of bees to that of fruit along the line of pollen distribution. The only com-

plaint against the bees was, they worked upon decayed fruit, especially grapes, and bothered the pickers. When it was explained to him that bees never puncture fruit, but simply work upon bruised or decayed fruit, it did not seem to satisfy him along the point of their bothering pickers—the fact that the bees were there and sometimes stung the pickers (when they were picked up with the fruit—Ed.). It was plain to see, taking the advantage gained by fruit pollinization, that the horticulturists who are posted at least want the bee but dislike the feature of pickers being stung and driven from their work.

"Foul Brood in Michigan," by Inspector F. E. Millen, of East Lansing, Mich. Mr. Millen's talk was well taken by the bee-keepers present, many of whom had already had a "touch" of some of the brood diseases prevalent in Michigan. It did not take those in attendance long to learn that we had the right man in the right place. "Thoroughness" seemed to be his "slogan" in handling brood diseases, which all know who have had anything to do with foul brood *must* be adhered to, or the cure may be worse than the disease. Inspector Millen has promised to keep the REVIEW readers well posted on his method of combating brood diseases, so this part of his talk will be omitted here.

Mr. A. G. Woodman, Grand Rapids, Mich., the Lewis "Beeware" representative for Michigan, was "on his job" as usual, and carried off the only prize for the most useful invention for bee-keepers on exhibition. It consisted of a section folder and foundation fastener combined, which Mr. Woodman is now introducing. The concensus of opinion among those who examined it was that it is the most practical device ever invented for this purpose, the crowning feature being that the section after being filled with foundation comes from the folder *right side up*, consequently the foundation is not weakened when turning the section over, as with most machines on the market.

Premiums were offered for best comb and extracted honey and beeswax. There was a very fine display of honey, both comb and extracted, and one to win a premium had to have something much above the ordinary to win out. Those carrying off honors were as follows: Best five sections comb honey, Frank Abbott, Palms, Mich.; best exhibit of comb honey, Floyd Markham, Ypsilanti, Mich.; best five pounds beeswax, C. E. Foote; best three sections comb honey, Floyd Markham, Ypsilanti, Mich.; most useful invention for bee-keepers, A. G. Woodman, Grand Rapids, Mich., section folder and foundation fastener combined; best jar of light extracted honey, Frank Pease, Marshall, Mich.; best exhibit of extracted honey, Floyd Markham, Ypsilanti, Mich.; largest exhibit of comb and extracted honey, Frank Pease, Marshall, Mich.; best single section of clover comb honey, Floyd Markham, Ypsilanti, Mich.

The National Bee-Keepers' Association

And its Affiliated Associations

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We are planning to begin publishing the report of the National Convention at St. Louis with the May number of the REVIEW. Too late to give a list of the new officers and directors this month. They will appear in the April number.

Home Marketing of Honey.

The problem of marketing honey at home has caused many to follow the course of least resistance, that of sending their honey to the cities and receiving a much lower price than would be possible to obtain in their own town or vicinity. This is not an invariable rule, however, as some places cannot use the entire amount that is produced in the locality. By studying the situation much can be done with the home market, no matter how small and discouraging.

This question will receive much thought and attention from producers this year, as a very large honey crop has been obtained in the north-central states. Honey markets in the large cities are overcrowded—"more honey than we ever had" they say. This will cause the market to weaken and drop in these centers. Never was the advice, "market at home," more needed.

A surprisingly large trade, with good

profits, can be built up in every small town. This will bring an increasing revenue every year if one produces only honey of the best quality, honey that is of good body and fine flavor. If you produce extracted honey, do not extract until the honey is fully ripened and capped.

A plan that has been very successful in building up a trade is that of giving away a sample of honey and personally talking with the lady of the house. A can of extracted honey is taken to the house and the lady of the house sought. She is told that you are not selling honey today, but that you are giving it away. Ask her for a dish that you may give her a sample. This can easily be drawn from the can by means of a honey gate. A little talk on who you are, where you live, and that you produce the best grade of honey possible, should follow. Give the price per pound of comb and extracted, and if you have it put up in pails, tell the

number of pounds they contain and the price. You need not hesitate to ask two cents per pound more for your extracted honey if well ripened.

The sizes of cans that I find best suited for the trade, are two, five and ten pound. You can go through the country and sell a large number of 10-pound pails to farmers.

Explain to customers that honey is an excellent food, with many medicinal properties, and that it should be on every table daily. In many cases you receive an order for a small quantity, which shows that you have made a good impression and a beginning. If not, leave a card with your name and address printed on the front, and on the back the sizes of the cans and the prices. If you have comb honey, that may be quoted also, in single comb or case lots. Tell the customer that in ordering it is only necessary to sign the card, mark what is wanted and mail it.

The giving of a post card apiary scene or swarm of bees, either at the time of calling or after some time has elapsed, has worked well. This brings in many orders as it creates interest and talk about bees and honey. At the time of delivering an order a little booklet giving recipes for making medicine from honey, for cooking, and telling the food value of honey will create an increased consumption of honey. Such booklets entitled, "Food Value of Honey," or "Honey as a Food," can be obtained at low prices from bee supply houses.

A small town can thus be made to use up a very large amount of honey and at a better profit to the producer than if sent to cities. The cards cost little and the booklets need only be used once. The second year you will be surprised how readily your crop can be disposed of.—N. F. GUTE in *Michigan Farmer*.

Colorado State Bee-Keepers' Association Convention. January 21, 1911.

Artificial Bee Pasturage.

W. L. FOSTER.

It is the nature of the busy bee to secure all the honey that is within its reach. Thus it commences early in the morning, and never lets up on its busy search for honey until the sun lowers behind the mountains, and darkness drives it from its toil. To make a success in the bee business, it is first

necessary to have a large amount of bees; second, they must be located where there are plants growing that have honey-producing flowers. The man that decides to make honey producing his business, usually locates where the greatest number of honey-producing flowers grow in a natural way.

But when we look at the best conditions that exist in any locality, we find that the period of time in which any one species of plants are in bloom is short, and in the best of locations there are only a few varieties of plants that secrete honey in abundance.

While these honey-producing plants are in bloom, the bees are having a great harvest; we call it the honey flow. In most localities there are only a few plants that yield honey in a commercial way. In Colorado we have the alfalfa and clover; in the East, white clover and basswood, and in some localities buckwheat; in California, sage and orange. While these plants are in their prime of bloom, the bees are having a bountiful harvest, and are filling the hive with the delicious nectar; but as soon as the blooming time is over, the bees are taking a rest—business is suspended; not much honey coming in, the bees are consuming what honey they have on hand, and waiting for the next species of plants to begin to bloom, when the bees take hold again and have another period of honey gathering.

To make beekeeping as profitable as it should be, we should have a succession of honey-producing flowers that would last from spring to fall, and if the bee-keeper goes into bee-keeping with the intensity he should, he may be able to produce this succession of bloom. In the bee business we depend too much on nature to produce the flowers. If the farmer waited for nature to raise him a crop of corn or other grain, would he receive a crop? We all answer, "no." He must first till the soil and plant the seed and assist nature. The bee-keeper is in the same kind of business; he is a producer, and must also assist nature. He has it in his power, and should see to it that there is a continuous bloom of honey-producing plants flowering from early spring to fall, so that bees are rearing brood and hatching more and more honey gatherers, and are continuously adding to the stores of the hive.

I will now mention a few of the plants that we should see are growing. We will commence with soft maple. This sometimes as early as February 22 is a good yielder, and also has an abundance of pollen, and the bark may be punctured so that the sap will run down the tree, making a place where the bees can gather water and also sweet. The elm comes a few days later, and is also a honey producer. Next comes the plum, the cherry, apple and other fruit blooms; the dandelion is coming on very fast, and is a good honey producer. Then the rape and mustard, and a great variety of the cruciferous order of plants. Then the yellow sweet clover and the raspberry, followed by the alfalfa, and a little later the sweet clover. Then comes the bass wood, blooming about the first of July. About this time the cleome commences to bloom and keep up a continuous bloom until checked by frosts. The Simpson honey plant, which grows along the water's edge, is a fine honey plant. There are a number of species of the mint family that come in from June to August 1; the wild horse mint, catnip and hoarhound. Then come the fall blooms: the asters, goldenrods, and many other of the compositae family.

I have now outlined what nature has done for us—yet there is not a bee-keeper who has a locality so good that he does not wish it were better, and it is now my aim to show how it may be made better. The soft maple is very easily produced from seed; all that is necessary is to secure the seed, plant them in good loam soil, and the next spring they will come up in abundance. They are large enough at four years old to plant for shade trees or for forestry. They bloom at a time of the year when the bees so much need the honey and pollen to stimulate brood rearing. The black locust is also easily raised from seed; the timber is valuable for posts; it blooms in May, and is a great honey yielder; it should be planted for shade, and also for forestry. The basswood has been wonderfully neglected. It is as hardy and is as rapid a grower as the cottonwood. It has no enemies in the way of borers or worms to feed on the leaves; the lumber and wood is valuable, and will always be in demand and at the time of blooming you will always find the trees heavy with the busy bees. It is so profuse in secreting honey that you

can see the drops of honey at the base of the petals. I had a hive in Wisconsin that gave me forty-five pounds in three days, and seventy pounds in six days. I thought that a good yield, but Brother Gill has one that very much surpassed that. When living in Greeley I sent East and procured a pound of basswood seed. I put the seeds in wet sand and buried them where they would be frozen through the winter. In the spring I planted them in rows and mulched with leaves. I had nearly all the seed germinate, and it was a pleasure to see those trees grow. This summer, when I was in Greeley, I found the trees thirty to forty feet high and loaded with bloom. There are a few trees in Denver—some on the North Side, some in the City Park, and some on Wheat Ridge—and every year they are full of bloom and covered with the busy workers. Whenever these trees are seen they are always the same—free from worms and borers, no aphids or insects on the foliage. The branches are tough and pliable, and do not break with early and late snows, as do many of our shade trees. There should be thousands of this timber planted each year.

The locust and maple are covered with the disgusting cottony aphid; the box elder and willow with the green aphid; but the old basswood stands out clean and beautiful, free of all pests and hardier than the cottonwood. There should be thousands of them planted in towns and cities, also in the forestry. Let the young beekeeper wake up and look to his future! When I lived in Greeley there was a general complaint against a gardener who sent East and got a package of dandelion seed, that he might have some for greens. I am also fond of greens, and ten years ago, if I wanted a mess of greens, I only knew of one place they grew—one mile east of Westminster. Now the country is covered with them, and we note that bees get through the spring much better than they did in the early beekeeping of Colorado.

The trouble with Colorado is, that there is a long time from March 1 to June 15, when alfalfa blooms, that is without flowers. I have had bees do so well on apple blossoms that they built queen cells and were planning to swarm when the apple bloom matured and fell. The bees find themselves without nectar, tear down the queen cells, destroy

the brood, and have less bees the first of June than they did the first of May. We want bloom to fill in this space, so as to have the bees in prime condition to store surplus when alfalfa comes in bloom.

The yellow sweet clover comes two weeks earlier than alfalfa; it grows in all kinds of soil; is a good forage for stock. If the seed was scattered throughout the country, we would soon have it in abundance—a blessing to the farmer and to the bee-keeper. The alsike clover blooms at about the same time; is a wonderful honey plant and a great hay plant. When in Michigan a few years ago, I secured twenty-five pounds of the alsike seed. I found a farmer out near Lakewood who was going to seed two pounds of alsike to the acre. Last season it bloomed. At first it looked as though nearly all alsike, but later on the alfalfa filled in and made a beautiful hay crop. The farmer told me he was offered \$12.00 per ton for the hay, when he was getting but \$8 for the straight alfalfa. It has been a poor season to make experiments, as we had a blighting freeze the 20th day of May, but it has gone far enough to prove to me there is much value in it, to the farmer as well as to the bee-keeper.

In driving from Denver to Boulder, a few miles south of Louisville, I discovered, growing on the plains, an acre or more of horehound. This is a great honey plant. A few seeds got there by chance, and have increased, until now the horehound covers several acres of dry clay and gravel soil. There are hundreds of thousands of acres like this soil which might be in horehound instead of cactus and other worthless plants. When living near Rocky Mountain Lake, I saved a quantity of cleome seed. In the spring I drilled it in the ground. It came up beautifully and made a wonderful growth. There are thousands of acres where cleome would grow, where the ground is growing nothing. The seeds could be buried or drilled in in early spring.

Let every bee-keeper study his locality, and let him see to it that there is a continuous bloom from spring to fall. I remember, when I first moved to Denver, I noticed, when driving back and forth to my bees, ten miles northwest of Denver, down by the foot of a small lake, a bunch of sweet clover growing. I would stop my team, get

down from my wagon, and observe the bees gathering honey. That was the only sweet clover in that part of the country. Today it is very common, yet there is not as much as there might be. Cannot we all aid the honey-growing plants to get a foothold? It is better to see yellow and white sweet clover growing than Russian thistle and horseweed. By sowing the clovers, we make feed for the cattle and honey for the bees, and thus we aid to bring the time when the land will flow with milk and honey.



THE LATE F. B. CAVANAGH

Former Director of the National Bee-Keepers' Association.

The members were shocked while at the National Convention at St. Louis to receive word that Director Cavanagh had died. He was to have been the delegate from the Chicago-Northwestern Association. Instead, the news of his death. We are informed that Mrs. Cavanagh will not continue the business, and asked that some one who is interested in the purchase of a large bee business, write her at Hebron, Ind.

NATIONAL GRADING RULES

Adopted at Cincinnati, Feb. 13, 1913.

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these three respects that any section shall be representative of the contents of the case.

I. FINISH:

1. *Extra Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. *Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. *No. 1*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. *No. 2*—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. *Heavy*—No section designated as heavy to weigh less than fourteen ounces.

2. *Medium*—No section designated as medium to weigh less than twelve ounces.

3. *Light*—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched up sections; sections weighing less than ten ounces.

NEW YORK—Our market remains in the same condition, dull and inactive. As to comb honey, there is some little demand for No. 1 and fancy white, while off grades, mixed and buckwheat are almost unsalable. During the past few weeks we have received several shipments of the last mentioned grades which we would rather not have had sent to us at all. The honey is more or less candied, combs poorly filled, some not fastened to the comb and broken loose, and as the season is practically over, with no demand to speak of, it will be hard work to dispose of these goods. We cannot encourage shipments of off grades of comb honey, mixed or buckwheat at this time, for we feel sure that we cannot make sale in a reasonable time nor satisfy the shippers, and therefore would rather not handle these grades at all. As to extracted honey, the only grade for which there is demand at this time is fancy quality white clover, which is selling at from 8½c to 9c per pound; all other grades are in poor demand. Beeswax steady at former prices.

Feb. 18 HILDRETH & SEGELKEN.

CHICAGO—Sales have improved in volume during the past thirty days; prices, however, are unsatisfactory in that they have a lower tendency and some of the comb honey shows granulation which renders it unfit for table use.

Fancy grades sell in small quantities around 15c per lb., but the off grades are difficult to place at uncertain prices. Extracted honey,

consisting of white clover and basswood, are rather firmly held and sell at from 8c to 9c per lb., according to quality and package, but the western and southern grades of white are very dull and sell at from 1c to 2c per lb. below these figures and it is most difficult to move in quantities.

Beeswax sells upon arrival at from 31c to 33c per lb., according to color and cleanliness.

R. A. BURNETT & CO.,

Feb. 16.

173 W. South Water St.

KANSAS CITY, MO.—The supply of comb honey is large, demand light. Supply of extracted honey fair, the demand also only fair. We quote our market as follows: No. 1 white comb, 24 sec. the case, \$2.50 to \$2.65; No. 2 white comb, 24 sec. the case, \$2 to \$2.25; No. 1 amber comb, 24 sec. the case, \$2.25 to \$2.50; No. 2 amber comb, 24 sec. the case, \$2 to \$2.25; extracted white, per lb., 8c to 8½c; extracted amber, per lb., 7½c to 7¾c; beeswax, per lb., 25c to 30c.

C. C. CLEMONS PRODUCE CO.

Feb. 16.

When sending in your renewal for the REVIEW, kindly ask your neighbor bee-keeper to subscribe with you.

Field Notes From Tennessee.

J. M. BUCHANAN, Franklin, Tenn.

Up to the present time, February 5th, this has been the mildest winter in years. There has been no snow and very little rain; in fact, there have been few days on which the bees could not fly. Brood rearing has been going on, and the consumption of stores will be heavy. Luckily most of the bees were in good shape at the beginning of winter, owing to the good fall flow. Some, however, will need looking after if the warm weather continues.

* * *

Perhaps the best meeting in the history of the Tennessee Bee-Keepers' Association was held at Nashville on the 30th of January, directly following a two days' session of the State Horticultural and Nurserymen's Association. These three organizations are co-operating to some extent, and the relation between the bee and fruit industries is being brought out as never before. Our Association now has over a hundred members on its roll.

National Members Having Honey for Sale.

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ills.
A. J. Diebold, Seneca, Ill.
Wm. Marshall, Carpentersville, Ill.
W. T. Sherman, Elkhorn, Wis.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint—Cotton Blend.

Wilmon Newell, College Station, Tex.

Raspberry

Geo. H. Kirkpatrick, Rapid City, Mich.
P. W. Sowinski, Bellaire, Mich.
F. D. Stephens, Box 383, West Branch, Mich.

Alfalfa

A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander, Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.

Wesley Foster, Boulder, Colorado.

Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association,
Idaho Falls, Idaho.
Arizon Honey Exchange, Tampe, Arizona.

Amber

G. Frank Pease, Marshall, Mich.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKee, Velasco, Texas.
L. O. Brainard, Lone Rock, Wis.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Guirin-The-Queen-Breeder, Bellevue, O.
P. W. Sowinski, Bellaire, Mich.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.

Mesquite.

Arizona Honey Exchange, Tampe, Arizona.

Basswood

N. E. France, Platteville, Wis.
 F. Gobeli, Glenwood City, Wis.
 Frank Kittenger, Rt. 11, Franksville,
 Wis.

Clover and Basswood blend

Elias Fox, Union Center, Wis.
 Dr. C. G. Luft, Fremont, Ohio.
 Frank Kittinger, Caledonia, Wis.

White Clover

F. X. Arnold, Deer Plains, Ill.
 B. F. Schmidt, North Buena Vista,
 Iowa.
 N. O. Walker, Franklin, Tenn.
 E. D. Lerch, Morrisonville, Dane Co.
 Wis., No. 19.
 E. H. Canfield, Carson City, Mich.
 Byron S. Hastings, Rt. 5, Brookville,
 Ind.
 S. C. Boyle, Bode, Iowa.
 E. A. Doney, Dixon, Iowa.
 Orville Safford, Fort Edwards, N. Y.
 C. J. Oldenberg, Belle Plains, Minn.
 J. H. Allemier, Delphos, Ohio.
 John Olson, Davis, Ill.
 Dr. C. G. Luft & Son, Fremont, Ohio.
 C. J. Barber, Smithland, Iowa.
 C. L. Pinney, La Mars, Iowa.
 A. S. Crotzer, Lena, Ill.
 Rev. F. Schedtler, Rt. 7, Sumner, Iowa.
 Geo. A. Hyde, New Canton, Ill.

W. H. Pearson, Mitchellville, Iowa.

John S. Coe, Boyce, Va.

M. H. Lind, Baders, Ill.

Arthur Thayer, Rt. 2, Freeland, Mich.

Frank Kittinger, Caledonia, Wis.

W. E. Forbes, Plainwell, Mich.

Wm. E. Prisk, Mineral Point, Wis.

Wm. Fox, Withee, Wis.

R. V. Langdon, Rt. 5, Baraboo, Wis.

Quirin-The-Queen-Breeder, Bellevue, O

Niels A. Nelson, Dike Iowa.

Geo. E. Capwell, Cottonwood Falls,
 Kansas.

L. O. Brainard, Lone Rock, Wis.

A. H. Fralick, Homer, Minn.

Joseph Kurth, Mineral Point, Wis.

Charles Lotz, Monroe, Iowa.

Joseph M. Elsbree, Waverly, N. Y.

Bell E. Berryman, 2308 20th Ave., Cen-
 tral City, Nebr.

Geo. W. Woodhull, Kinde, Mich.

J. H. Haughey, Berrien Springs, Mich.

Mangrove, White as Clover

A. F. Brown, Hawks Park, Fla.

Partridge Pea

J. J. Wilder, Cordale, Ga.

Buckwheat

Jas. McNeill, Hudson, N. Y.

E. A. Duax, Chippewa Falls, Wis.

Leland Farnsworth, Chief, Mich.

Wilmer Clarke, Easlvile, N. Y.

Notice to Secretaries.

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we were very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the REVIEW from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	96
E. J. Winder, Utah.....	14
P. E. Crane, Vermont.....	13
H. E. Gray, New York.....	12
E. G. Carr, New Jersey.....	11
Dr. L. D. Leonard, Minnesota.....	10
J. S. Whitmore, Massachusetts.....	7
J. W. Van Leenhoff, Puerto Rico.....	7
S. W. Snyder, Iowa.....	5

Geo. W. Williams, Indiana.....	3
Gus Dittmer, Wisconsin.....	3
O. H. Schmidt, Michigan.....	2
L. C. Dadant, Chicago North-western.....	1

The Review Debt Subscription List.

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we *must have* many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$32.25
Will G. Le Noir, Jr., Philadelphia, Tenn.....	1.00
Floyd Markham, Ypsilanti, Mich.....	1.00
R. W. Adams, Attica, N. Y.....	1.00
Miss Nina Scott, Clinton, Mo.....	.50
F. C. Fischer, Thorp, Wash.....	1.00
S. F. Seeley, Ada, Mich.....	1.00
H. D. Murray, Mathis, Texas.....	1.00
J. F. Schedtler, Harlan, Oregon.....	1.00
Wm. Stika, Little Ferry, N. J.....	.50
Louis VanButsele, Collinsville, Ill.....	.50
J. Beckley, Nerstrand, Minn.....	1.00
F. W. Lueback, Knox, Ind.....	1.00
Bruce Baldwin, Durango, Colorado.....	1.00
Hiram Roop, St. Louis, Mich.....	1.00

Subscriptions to the REVIEW debt are not coming as fast as we anticipated; still, we have at this writing \$44.75 subscribed, and expect by the time this REVIEW reaches the reader we will have \$50 subscribed, at which time we will make a payment upon the debt. This will leave \$650 we still owe upon the REVIEW. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the April REVIEW. We feel proud of the above list. It is the largest one yet, and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we would like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

THIS AND THAT

A Swarm of Bees.

Once a little boy and I went out for a walk. He saw a swarm of bees in a tree and said, "What are those things?" I said, "They are *honey* bees; throw a stick at them and see them fly." So he did, and one stung him in the eye and he cried, "Pull it out!"

MARIE E. TOWNSEND.

Age 11 years.

MEDINA, N. Y., January 13th.

Editor REVIEW: Kindly discontinue my name in the "Honey for Sale" column, as am all sold out. Fully 90% of my extracted honey I sold as result of that little notice. I averaged a shade under 9c per pound for clover. I thank you and wish the National Association and REVIEW the success which they merit. I am, fraternally, G. M. BREWER.

Elkader, Iowa, Feb. 5, 1914.

Editor REVIEW: Please take my name off the list of parties that have honey to sell, for my honey is all sold, and most of the sales were made through the assistance of the National Bee-Keepers' Association. I believe the National is all right and getting better every day. Thanking you for past favors, I remain, yours very truly,

JOHN G. WAGNER.

Editor REVIEW:

Dear Sir—I enclose one dollar to apply on REVIEW debt. I believe there are National members enough who by giving \$1.00 each (and never miss the money) could wipe out the debt. The question is, will they or will they wait for the other fellow?

Yours truly,

FLOYD MARKHAM.

[We do not think they will wait much longer, friend Markham, as we have received several letters from those who expect to contribute soon to the REVIEW debt. You will notice that the list is much larger this month than heretofore, which is very encouraging. We thank you, friend Markham, for the donation, as well as the other friends who have so liberally contributed.—Ed.]

Fort Edward, N. Y., Dec. 6th, 1913.

EDITOR REVIEW: My honey is all sold. Please discontinue my name in the free adv. column in the REVIEW of members having honey for sale. Thanking you for your help in disposing of my crop, I remain, yours truly,

ORVILLE L. SAFFORD.

Blackfoot, Idaho, Jan. 13, '14.

Editor BEE-KEEPERS' REVIEW:

Dear Sir—Do not stop the REVIEW. I believe our Association is going to send in its members' renewals. I have ordered it through Idaho Honey Producers' Association.

I will attend the National Convention at St. Louis as delegate from this Association.

Yours truly,

J. H. STONEMAN.

Brecksville, Ohio, Jan. 3rd, 1914.

EDITOR REVIEW: Enclosed please find two dollars for my renewal to the REVIEW, and that of my friend, Geo. Haas. Mr. Haas is just a beginner with bees. It was stated in the REVIEW that each subscriber should get at least one new subscriber, so here is mine. Am trying hard to get some more subscribers. They do a tremendous lot of hesitating but I think some will come to it later. Yours truly,

GUST RENNERT.

[Friend Rennert: We thank you for the subscriber sent us, and appreciate your effort to get more. We presume it does take a "tremendous" amount of persuasion to get some to subscribe for the REVIEW. Mr. Hutchinson used to tell the writer that it cost him two dollars for each new subscriber to the REVIEW, in which case you have earned your REVIEW for two years by sending us this one subscriber. Wish we were able to make our subscribers such offer (to those who will send in one subscriber a two years' subscription to the REVIEW). We cannot do it now, but may be able some day to do this very thing.—Ed.]

Subscribe for The Review

Declares Bees Are Overworked.

NORTHPORT, Dec. 6.—G. M. Dame, representing the Boughey and Dame Montmorency cherry orchard, says that more bees are needed in the western Michigan country to insure the pollenization of the fruit blossoms.

Thousands of trees have been set during the past few years, and the number of colonies has been increased but little. The point has now been reached where the present bee population is unable to render the service expected of it, and more colonies are needed.

Mr. Dame believes that at least fifty new colonies should be established in his immediate neighborhood, and several times that number should be located within what is properly known as the Northport section. Mr. Dame is sure that what is true regarding the needs of the Northport territory is also true regarding sections of western Michigan, where there have been heavy settings of fruit trees.

He considers the need of bees so great that he suggests that colonies be allowed to increase until all the hollow trees in the woods are filled, as well as a goodly number of hives.

Classified Department.

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX.

WANTED.—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED.—Five or six tons of amber and buckwheat extracted honey. HENRY J. ZINN, 1135 Wyo Ave., Forty Fort, Pa.

FOR SALE.—Well ripened extracted white clover honey in 60-lb. cans and barrels. Address H. W. FUNK, Norman, Ill.

FOR SALE.—A blend of very light amber white and sweet clover honey at 9c a pound. Four cases or more at 8½c a pound. Sample, 5c. A. J. DIEBOLD, Seneca, La Salle Co., Ill.

IDAHO FALLS, IDAHO.—Comb honey all sold. We quote fancy white extracted in 60-lb. square tins at 7c. IDAHO HONEY PRODUCERS' ASSN., Idaho Falls, Idaho.

FOR SALE.—Fine ripe raspberry and milkweed honey mixed. A fine blend in 60-pound cans. Price, 9c per pound. Sample, 5c. Address GEO. H. KIRKPATRICK, Rapid City, Mich.

FOR SALE.—Clover Comb and Extracted Honey. Address A. J. DIEBOLD, Seneca, Ill.

WANTED.—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th st., Philadelphia, Pa.

WANTED.—Comb, extracted honey and beeswax. R. A. BURNETT & Co., 173 So. Water St., Chicago.

FOR SALE.—5,000 lbs. extracted honey in 60-lb. cans; also 55 cases comb (mostly white clover). JOHN OLSON, Davis, Ill.

FOR SALE.—Choice, thick, well ripened extracted honey, of delicious flavor. Price \$12 per case of two 60-lb. cans. Write for prices when put up in 5 and 10-lb. pails. O. H. SCHMITT, Rt. No. 5, Bay City, Mich.

FOR SALE.—We have a car of Mesquite honey for sale at 6½c per pound, f. o. b. here. We also have two carloads of light amber alfalfa honey at 5½c, f. o. b. here. ARIZONA HONEY EXCHANGE, Tempe, Arizona.

FOR SALE.—4,000 pounds fine quality Raspberry-Milkweed blend of honey at 8c per pound. Also 1,000 pounds light amber at 7c, f. o. b. here. All in new 60-pound cans, two in a case. Sample free. P. W. SOWINSKI, Bellaire, Mich.

FOR SALE.—White Clover Honey, none better. In 10 lb. pails, six in a case, at \$6.50 per case; 5 lb. pails, 12 in a case, at \$7.00 per case; ½ lb. glass jars, 24 in a case, at \$2.80 per case. Sample, 4c. HENRY STEWART, Prophets-town, Ill.

FOR SALE.—Extra fine extracted clover honey. Have had no better in 25 years. Tiered up and well ripened before extracted. It is in new 60-lb. (net) square cans, two in a box. Price on request. DR. C. G. LUFT & SON, Fremont, Ohio.

HONEY FOR SALE—40 cases (two 60-lb. cans each). A blend of white and sweet clovers mostly and clovers and fall flowers. A very light amber, good quality; 9c and 8½c in large lots, 9½ and 9c four cases or less. ALFRED MOTTAZ, Utica, Ill.

BEEES AND QUEENS.

BEEES by the pound, without comb, \$1.25; ½ lb., 75c; queen, Italian, \$1.00. ROSEDALE APIARIES, Big Bend, La.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on nuclei for May delivery. We have Moore's strain of Leather-colored Italians. OGDEN BEE AND HONEY CO., Ogden, Utah.

QUEENS by return mail. Tested, \$1.00 each; untested, 75c; \$7.00 per doz. Three-band Italians only. No disease, and satisfaction guaranteed. J. N. K. SHAW & Co., Loreanville, La. (Iberia, Pa.)

FOR SALE.—Three-banded and Golden Italian queens and bees that are gentle, prolific and the best of honey getters. Also bees by the pound and half pound, and nuclei. Circular on request. L. & H. APIARIES, Clarkston, Mich.

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c. E. E. MOTT, Glenwood, Mich.

QUEENS bred from Moore and Doolittle's best Italian stock. Untested, 60c each, \$6.60 per doz., \$50 per 100. Tested, 90c each, \$10.20 per doz., \$80 per 100. Delivery guaranteed. Book orders now. Nuclei, any quantity, 2-frames \$1.50, 3-frames, \$2. Add price of above queens wanted. SPENCER APIARIES Co., Nordhoff, Cal.

WE RE-QUEEN OUR BEES every year with best Italian stock to prevent swarming. We offer the one-year-old queens removed from these hives at 50c each, \$5.40 per dozen, \$40 per 100. Delivery guaranteed. Book orders now. Nuclei, any quantity, 2-frames, \$1.50; 3-frames, \$2. Add price of above queens wanted. SPENCER APIARIES Co., Nordhoff, Cal.

DIXIE SWARMS direct to you in April. Stop and think for half a minute what a small package of bees or nuclei would do if put on those unoccupied combs early in the spring. The cost is just a drop in the bucket and your 1914 honey crop may be doubled. Bees by the pound, queens and nuclei shipped during April. Carefully selected stock. Excellent express and mail service. *Prices low.* Save money by writing at once for our price list and estimate on your order. CONNEAUT LAKE BEE Co., Mel-drim, Georgia.

FOR SALE.—A limited number of very carefully reared Italian queens. Original stock from Moore and Doolittle. Let me book your order now, then mail your queens during spring and summer. A limited number of tested and breeding queens for spring delivery at the following prices: Tested, at \$2; selected tested, at \$2.50 each; breeders, the very finest, at \$5 each. Untested, June and later, at 90c each, or \$9 per dozen. Orders filled in rotation as booked. Get on the list early to be sure of your supply of queens. R. A. SHULTS, Rt. 3, Cosby, Tenn.

MISCELLANEOUS.

FOR SALE—Motor Cycle. Telephones. Address E. PRESSLER, 1726 Armitage Ave., Chicago, Ill.

FOR SALE—Rufus-red Belgian Hares. Price list free. HARVEY L. STUMB, Richland Center, Pa.

FOR SALE—Bee-Keepers' supplies, honey and bees. Write for price circular. A. E. BURDICK, Sunnyside, Wash.

FOR SALE—A blend of White and Alsike clover seed; also light amber Aster honey. N. O. WALKER, Franklin, Tenn.

BEE-KEEPERS—If you are interested in Double-walled Hives, write for our free catalogue. THE L. F. HOWDEN MFG. Co., Fillmore, N. Y.

FOR SALE.—Sheep shearing machine, No. 1 condition. Will trade for honey. ROUTE 1, Box 47, Ghent, Minn.

FOR SALE—Root's Goods and Dadant's Foundation at factory prices. SPENCER APIARIES Co., Nordhoff, Calif.

YOUR NAME AND ADDRESS on 100 envelopes, 30c; on 100 sheets writing paper, 30c. All postpaid. PEARL Co., Clintonville, Conn.

FOR SALE.—Flemish Giants Rabbits, \$3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats, 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

HELIANTI—the big money maker; beats ginseng or anything else that grows. Write for full particulars. BURGESS SEED Co., 9 B. K., Allegan, Mich.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson, Mich.

TO EXCHANGE FOR EXTRACTED HONEY—One Wheel-hoe with Seeder; one Spray Pump; one Cider Mill. All high-grade articles, used very little. Write for particulars. JOHN E. MILLER, 44 Broad St., New York City.

FOR SALE.—Fifteen Little Wonder Bingham Smokers at the exceedingly low price of 45c each, or three for \$1.20. The smokers can go by parcel post by including postage for two pounds each. Also a quantity of sections for comb honey. Address Mrs. W. Z. HUTCHINSON, 1122 Detroit St., Flint, Mich.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE.—Two dozen mailing cases, bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

SWEET CLOVER SEED FOR SALE—We have at Syracuse, N. Y., 1,600 pounds White and Yellow sweet clover seed mixed, about half and half each. It is unhulled and we can offer it in 50 to 100 pound lots at the extremely low price of 10c per pound, in sacks, on board car at Syracuse. The yellow variety blooms about two weeks earlier than the white, so the two sown together would likely make the honey flow that much longer. We have in Boulder, Colorado, 175 pounds of the white variety, hulled, that contains likely 2% of weed seed. We quote it at 15c per pound in lots of 50 to 100 pounds. We have in Cornell, Ill., 300 pounds of the white variety of seed containing likely 2% of weed seed. This we can sell you at 15c per pound in car there. This is hulled seed, also. Address with remittance, NATIONAL BEEKEEPERS' ASS'N., Northstar, Michigan.

WANT TO SEND YOU our catalog and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR SALE.—A few trios of Buff Minorcas, extra good layers. Also want Hershiser Wax Press. CLYDE GODFREY, R. F. D. 9, Jonesville, Mich.

FOR SALE.—The Weaver Automatic Honey Extractor. It reverses at full speed, is simple and positive, saves 50% of labor, and at the same time increases the output 50%. A four-frame will do the work of an eight-frame. Everyone in the market for an extractor send for full particulars. WEAVER BROTHERS, Richmond and Falmouth, Ky.

RANCH FOR SALE.—Twenty acres, 2½ miles from Twin Falls, Idaho. Good apiary section—good crop of honey this year. Fifteen acres 4-year-old apple trees; alsike clover sown in orchard. With or without 50 colonies of bees, or will sell 80 acres mostly in sage brush 22 miles west of Twin Falls. Must sell one place at once. Address Box 48, R. 3, Twin Falls, Idaho.

FOR SALE.—We will move our bees from the north yards here to Northstar in the Spring. By doing this we find we have more tools and supplies than is necessary to work them all here in this one location, so will offer for sale one 4-frame Automatic Extractor, one 4-frame Novice Extractor, one 2-frame Novice Extractor—Root's make, two Peterson Capping Melters, one Bune Capping Melter, one home-made Capping Melter, 40 Miller Feeders, two Section Foundation Fasteners, one Hubbard Press. E. D. TOWNSEND & SONS, Northstar, Mich.

A RARE OPPORTUNITY to start in the bee business, with the sale end of the business all worked out. It consists of four yards of bees; 140 colonies all told. One of those yards contain very carefully bred Carniolan bees and some very fine breeding queens of this race. A Carniolan trade that took 500 queens last summer. Two and a half acres land mostly set to small fruit; one horse, harness and wagon; one Overland automobile, model 40, with body to set on for carting bee fixtures to and from yards; one honey packing house 14x28 feet, with full equipment for packing honey in glass. A honey business that takes 2,000 dozen during the season. A mail order trade that takes 10,000 lbs. honey in tins, shipped direct for family use. Full equipment for running these bees for extracted honey. This splendid opportunity is open in New Jersey. Address CARNIOLAN, care Bee-Keepers' Review, Northstar, Michigan.

YOU ARE INVITED TO JOIN THE "NATIONAL."

HONEY COMB AND EXTRACTED

We can furnish both comb and extracted honey to bee-keepers who have run out of their own product. All our honey is strictly first-class. Italian Bees and Queens in season. Write for prices.

LATSHAW HONEY CO.

Carlisle, Indiana

BOOKS ON PRACTICAL BEE CULTURE.

Parcel Post—Include postage as weight indicates.

A B C and X Y Z of Bee Culture, cloth	\$2.00	4 lbs.
A B C and X Y Z of Bee Culture, half leather	2.75	4 lbs.
A B C and X Y Z of Bee Culture, German ed.	2.50	3 lbs.
A B C de L'Apiculture French ed.	2.00	3 lbs.
Advanced Bee Culture, W. Z. Hutchinson	1.00	2 lbs.
Biggle Bee Book50	
British Bee-keepers' Guide-book, Cowan	1.00	1 lb.
Cook's Manual of the Apiary	1.15	2 lbs.
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Fifty Years Among the Bees, C. C. Miller	1.00	2 lbs.
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Irish Bee Guide, Rev. J. G. Digges	1.00	1 lb.
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Modern Bee-farm, S. Simmins	2.00	2 lbs.
Practical Bee Guide	1.00	
Quinby's New Bee-keeping	1.00	2 lbs.
Wax Craft	1.00	
Increase Forcing the Queen to Lay; each25	2c
French edition, separate50	2c

POPULAR BOOKS ON BEE CULTURE.

Bee People, The, Margaret W. Morley	\$1.50	2 lbs.
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Gleanings Library		
..50c each, 3 for \$1, 5 for \$1.50		

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A B C of Potato Culture, paper57	1 lb.
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A B C of Strawberry Culture, paper50	1 lb.
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Tomato Culture40	1 lb.
Tile Drainage, W. I. Chamberlain40	1 lb.
Maple Sugar and the Sugar-bush, paper30	1 lb.
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How to Keep Well	1.00	
Our Farming75	
The Dollar Hen	1.00	
What to Do, paper50	
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Celery for Profit27	
A B C of Carp Culture25	

Address All Orders

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

ITALIAN QUEENS

Beginners' outfits and other supplies. Send for list. Address

ALISO APIARY CO.,
Glendale, California.

CHOOSING THE RIGHT PRESENT.

Are you in doubt about a certain present? The Youth's Companion has proved to be one of the best that can be chosen. Perhaps you have not seen it lately, and are not quite sure. Then let us send you a sample copy or two. Suppose you ask for the issues containing the opening chapters of Arthur Stanwood Pier's fine serial story of life in a boys' school—"His Father's Son." If you look the paper over carefully, bearing in mind that there are fifty-two such numbers for a year's subscription of \$2.00, we are sure you will say that a better present could not be chosen, whether for a young person or for an entire family.

For the year's subscription of \$2.00 there is included a copy of The Companion Practical Home Calendar for 1914, and all the issues for the remaining weeks of this year, dating from the time the subscription is received.

If you ask for sample copies we will send with them the Announcement for 1914.

THE YOUTH'S COMPANION,
144 Berkeley St., Boston, Mass.

New Subscriptions Received at this Office.

We are always in the market for

BEE SWAX

and would be pleased to hear from you whenever you have any to offer. *We pay cash on receipt of Wax.*

FRANK C. CLARK

316 W. Kinzie St.

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8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1**

THE LANDSCAPE GARDEN CO.,
Newburgh, N. Y.



Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," for their letter heads, envelopes or circulars, can be furnished with them for 50c. each, post-paid. Address

Try My Famous Queens**From Improved Stock**

The best that money can buy; not inclined to swarm, and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one, \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15; two-frame, \$3.50; six two-frame, \$20.40; nuclei with tested queen, one-frame, \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

W. H. Laws

Will be ready to take care of your Queen orders, whether large or small, the coming season. Twenty-five years of careful breeding brings Laws' Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested, after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

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THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

"falcon"

Bee Supplies

Shipping Cases, Extractors, Hives,
Etc. Everything for the
Bee-Keeper

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care, and we feel confident that you will be well pleased with them.

Send for our Red Catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

Our Very Best is THE Very Best.

Best Sections

**Best Shipping Cases and
Dealer in Best Bee
Supplies**

We make a specialty of manufacturing **Best** Sections. They are the **FINEST** in the land, none better. When you once buy Lotz Sections you will want no other. Now is the time to buy and have them when the honey flow is on. Prompt shipments. Our bee supply catalogue for the asking.

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Boyd, Wis.

PAGE-KENKEL MFG. CO.

MANUFACTURERS

of the

**"NONE BETTER"
Bee-Keepers'
Supplies**

Perfect sections from young, white, basswood. White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

GUARANTEE:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

Page-Kenkel Mfg. Co.
New London, Wis.

Caucasian Queens and Partridge Pea Honey

NEAR the close of the season
I will have some Caucasian
Queens for sale at \$1.00 each.

My crop of Florida Partridge
Pea Honey is now ready and
for sale, packed in 24-lb. ship-
ping cases, 8 cases to carrier,
\$19.20 per carrier, f.o.b. Florida.

J. J. WILDER
Cordele, Ga.

A Rare Opportunity

We will move our bees from the raspberry location in Charlevoix County, to Northstar next spring. This raspberry location is likely as good as any in Northern Michigan at the present time, and we own all the bees in that particular location. We have five buildings at this location, one a log cabin to camp in, one a storeroom and three honey houses at the three locations where we locate our bees during the honey season. We also have a large cellar, where we are now wintering 385 swarms of bees. The location is a large lumbering district and no rent is demanded, although we usually divide some honey among those most interested. We would sell our buildings, cellar and good will.

E. D. TOWNSEND & SONS,
Northstar, Michigan.

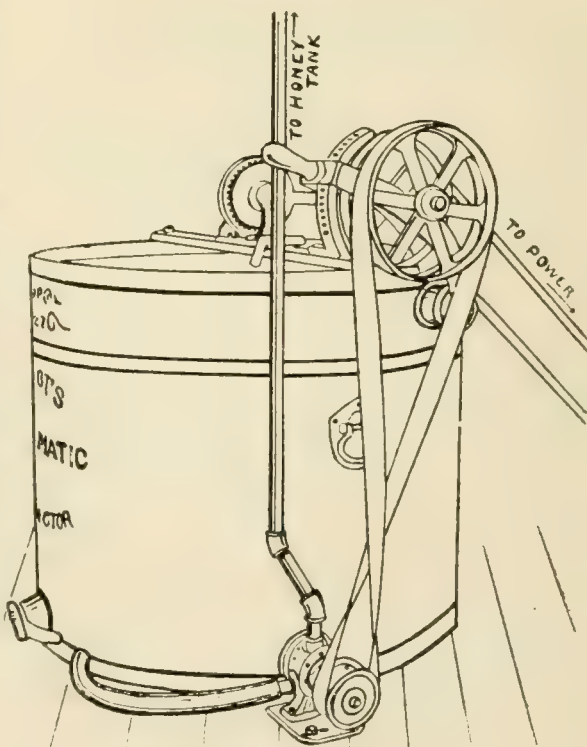
Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP**, then run them with a **NATIONAL 1½ H. P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and everything necessary pertaining to the outfit, at \$84.00.

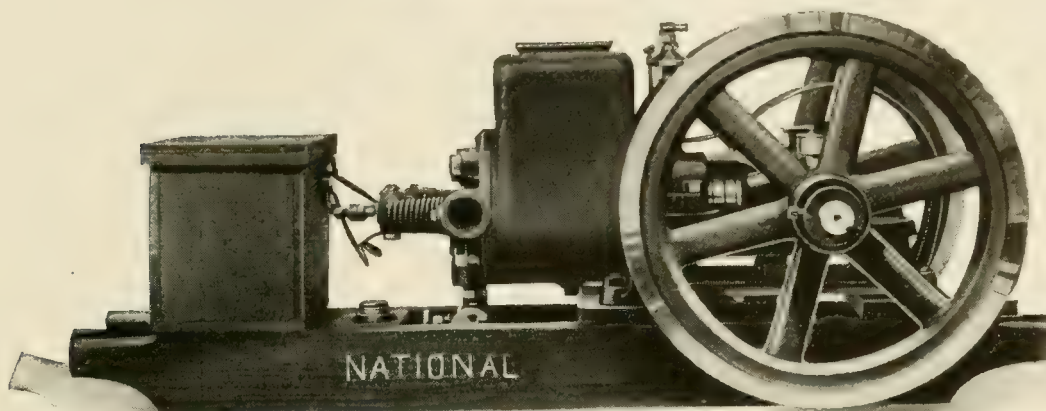
Six-frame extractor outfit as above at \$92.00. Eight-frame extractor outfit as above, at \$99.00. Without honey pump, deduct \$17.50. The engine shipped from Wisconsin and the balance of the outfit from Medina, Ohio. The National will take the money you hand us and buy the above outfit. **Direct from the manufacturer, at our one small profit system, on the co-operative plan.** Address with remittance

**National Bee-Keepers'
Association**

Northstar, Michigan.



1 1/2 H. P. Hopper-Cooled National Engine



General Description

In design, National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1 1/2; bore, 3 3/4; stroke, 4 1/2; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1 1/4; floor space, 9x36; shipping weight, 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n., Northstar, Michigan.

McFall, Mo., Jan. 2, 1914.

BEE-KEEPERS' REVIEW:

Find enclosed P. O. money order for \$1.00 for my renewal to the BEE-KEEPERS' REVIEW. I think your paper is a great help to bee-keepers in many ways. I wish you great success.

Yours,

J. E. ENYART.

Those wanting to try those gallon packages to mail direct to their customers should order them early, as we anticipate a large demand for them. Shipped from Detroit, Mich., at \$11.00 per 100, crated, 50 in a crate, to go by freight. Address

NATIONAL BEE-KEEPERS' ASSN.,
Northstar, Mich.

GET TOP NOTCH PRICES FOR YOUR MONEY BY USING LEWIS SECTIONS AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributor.
G. B. Lewis Company, Watertown, Wis.

Three-Banded Italian Queens

Bees by the pound. No better stock for honey-gathering anywhere. Every order filled promptly last season and not a dissatisfied customer. About 550 Nuclei and 11 Apiaries to draw from. No foulbrood or other disease; 18 years' experience rearing queens. Up-to-date methods. Book your orders early for queens or bees in quantities.

PRICES—QUEENS.

Untested: 75c straight. **Tested:** \$1.00 each, \$90.00 per 100.

After May 10th.

Untested: 1 for 70c, 6 for \$4.00, 12 for \$8.00, 100 for \$65.00.

Tested: 1 for \$1.00, 6 for \$5.00, 12 for \$10.00, 100 for \$80.00.

Select Tested: \$1.50 straight. **Breeders** \$5.00.

Bees by the pound: 1 pound, \$2.00; 10 pounds, \$18.50; 100 pounds, \$180.00.
F. O. B. Mathis, Texas.

Safe arrival of bees guaranteed within five days of Mathis, Texas. Write for circular.

SATISFACTION GUARANTEED OR MONEY REFUNDED

**H. D. MURRY, Queen-Breeder,
MATHIS, TEXAS.**

ORGANIZED CO-OPERATION

ADVANCEMENT

The Western Honey Bee

A new Magazine owned and run by the California State Bee-Keepers' Association. Extensive crop reports from the whole country. Hear what the Bee Men say that figure their honey by the car load.

ADVERTISERS

Write for prices. Money spent with us brings business. Issued the first day of each month. \$1 a year.

Business Office, Covena, Cal.

**J. D. BIXBY,
Editor.**

"NONE BETTER"**"NONE BETTER"*****Western Dealers, Attention !****This message is to you, the large users of Double-Tier Shipping Cases*

We make the best shipping case on the market and specialize on the double-tier for the Western trade. Tell us your needs and let us send you sample of a perfect shipping case and surprise you with our prices.

PAGE-KENKEL MFG. CO.*New London, Wisconsin***Manufacturers "NONE-BETTER" Bee-Keepers' Supplies**

Under date of Feb. 12, Page-Kenkel Mfg. Co. write the REVIEW office in part as follows:

We really have an excellent stock for double-tier shipping cases and sections. We know that we have the best on the market and furthermore our prices are right as you will note from the enclosed jobber's list, the prices that we make to car load buyers. We are right in the heart of the Basswood district and we have our buyer out looking for timber all the time. Naturally we pick up small lots in different places and we certainly get some excellent timber. We know that if we can break in on that western trade no one will get it away from us. Right now is the time that we ought to be making these double-tier cases, and while several of those large western dealers are dicker-ing with us we haven't as yet closed with any.

We guarantee our goods absolutely and agree to refund any money and transportation charges to any customer who is dissatisfied for any reason whatsoever. We really do not know how to make our guarantee any stronger.

"NONE BETTER"**"NONE BETTER"****LEWIS HIVES ARE BUILT LIKE FURNITURE
ARE PERFECT IN ALL RESPECTS**

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

"Griggs Saves You Freight"**TOLEDO****"Griggs Saves You Freight"**

New Goods arriving permits us to fill orders same day as received, and this with direct lines to your door and low freight rates makes **TOLEDO** the best place to order your goods from.

Our **New Illustrated Catalogs** for 1914 are here and being mailed out. Send in your name for one.

Send us list of goods wanted and receive our **special price** for quantity orders. **BEEWAX** is in great demand, send it in now. We pay 32c Cash, 34c in Trade. Shoot it in.

S. J. GRIGGS & CO.

25 N. ERIE ST.,

TOLEDO, OHIO.

"Griggs is Always on the Job."**30 DISTRIBUTING HOUSES FOR LEWIS BEEWARE**

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

Celebrated Queens Direct From ITALY

Bees more beautiful, more gentle, more industrious.
The best honey-gatherers.

PRIZES:

Sixth Swiss Agricultural Exposition, Berne, 1895.

Swiss National Exposition, Geneva, 1896.

Bee-Keeping Exhibition, Liege, Belgium, 1896.

Bee-Keeping Exhibition, Frankfort O. M., (Germany).

Convention of the German, Austrian and Hungarian Bee-Keepers, August, 1907.

Universal Exposition, St. Louis, Mo., U. S. A., 1904 The HIGHEST AWARD.

Extra Breeding Queens, selected, \$2.00; Fertilized, \$1.50. Lower prices per dozen, or for more Queens. Safe arrival guaranteed. Write.

ANTHONY BIAGGI

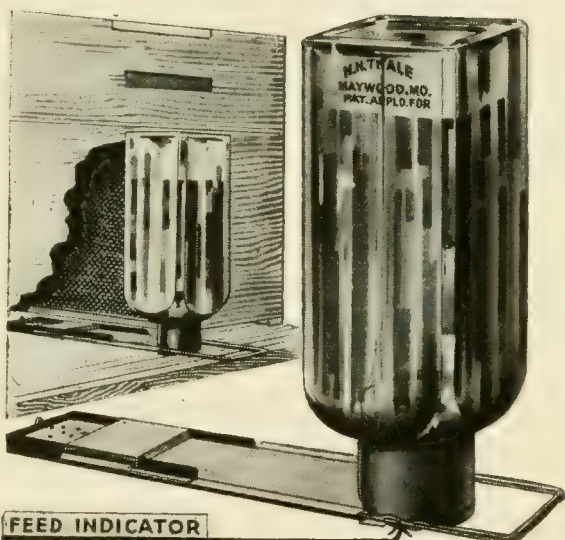
Member of the National Bee-Keepers' Association.

PEDEVILLA, NEAR BELLINZONA, ITALIAN SWITZERLAND.

This country, politically, Switzerland Republic, lies geographically in Italy, and possesses the best kind of bees known.

Mention in writing "THE BEE-KEEPERS' REVIEW."

Thale's Regulative Vacuum Bee Feeder!



Most perfect stimulative feeder ever constructed. It feeds inside underneath the cluster, and will fit any hive made. To fill feeder, lift off empty bottle and set on full one. It is so regulated by the slide from the outside of the hive to feed any amount that you may want the bees to have in one day. If you set it on one-half pint in one day the bottle of feed will run four days and nights and can be increased or decreased from the outside of the hive without disturbing the bees or moving the feeder. It feeds continuously, thereby imitating a natural honey flow, and will produce more brood with less cost than any other feeder made, and can be filled any time of the day without causing robbing or excitement.

Queen Breeders especially cannot afford to be without this feeder, as hundreds of valuable queen cells are torn down and destroyed by the bees annually on account of improper and poor methods of feeding. With this feeder

you control the flow. It feeds continuously and will produce more cells, better cells and the bees will not destroy any. Try this feeder; it will more than pay you.

The New Model on Ten Days' Free Trial.

I will ship you as many Feeders as you may want on ten days' free trial in your own apiary, and if they do not work as represented, you may return them at my expense and your money will be refunded. Send for free trial offer. Address Free Trial Dept., R. 145.

TERMS, CASH WITH ORDER

Sample Feeder, with 2 bottles complete, mail postpaid.....	55c
Ten Feeders, complete with 1 bottle, freight or express, each.....	35c
All orders over ten feeders, each only.....	30c
Extra bottles with cork valve, each.....	10c

H. H. THALE

Inventor and Manufacturer, Box R 25

MAYWOOD, MISSOURI

Send for feeder circular and bee-supply catalog. I carry a full line of Lewis Bee Ware and Dadant's Foundation. One of my Vacuum Bee Feeders complete with two bottles FREE with every ten-dollar order. Send me a list of your wants—it is no trouble to answer letters.

Eastern buyers send orders to Earl M. Nichols, Lyonsville, Mass.

THE BEEWARE BRAND MEANS SUCCESS INSURANCE

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

BE A HARD BUYER

BUY YOUR COMB FOUNDATION THE CHEAPER WAY

THE CHEAPER WAY—Ship your Beeswax to Gus Dittmer Company and have it made into any grade of DITTMER FOUNDATION you need.

Write for information before you sell your Beeswax.

Beeswax taken in payment for making your wax into DITTMER COMB FOUNDATION.

Ask for the new 1914 catalog.

GUS DITTMER COMPANY

Augusta, Wisconsin

Send for Our Prices on

BEE SWAX

We are paying higher prices than ever before at this Season. WHY? Because of the tremendous demand for

Dadant's Foundation

Write at once. We will quote prices F. O. B. here or F. O. B. your station.

DADANT & SONS

HAMILTON, ILL.

Do you know The Youth's Companion as it is to-day?



Improved and broadened in its scope. Enlarged by the addition of a Special Family Page, Boys' Page, Girls' Page and Chil-

FREE TO JAN. 1914

Cut this out and send it with \$2.00 for The Companion for 1914, and we will send FREE all the issues for the remaining weeks of 1913 and The Youth's Companion Practical Home Calendar for 1914.

THE YOUTH'S COMPANION, BOSTON, MASS.

dren's Page. Great serial stories, 250 short stories. A remarkable Editorial Page. Current Events and Science. A wealth of variety and quality, and all of it *the best*.

Illustrated Announcement for 1914 free on request.

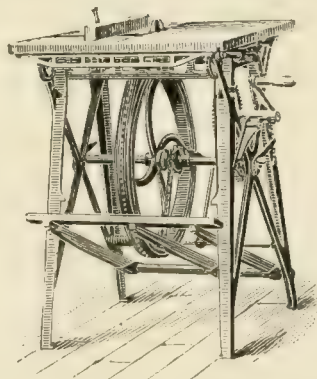
Remember — 52 Times a Year, Not 12

Great Family Combination Offer

We do not know of any Family Weekly that we can more heartily recommend to our readers than The Youth's Companion. It gives us pleasure, therefore, to announce that we have arranged with the publishers to make the following offer.

The Bee-Keepers Review	<i>Regular</i>	\$1	} <i>Both Papers Together For One Year</i>	\$2.50
The Youth's Companion	<i>Price</i>	\$2		

To take advantage of this Club Rate send all Subscriptions to The Bee-Keepers' Review, Northstar, Mich.



Make Your Own Hives

Bee Keepers will save money by using our Foot Power

SAWS

in making their hives, sections and boxes.
Machine on trial. Send for Catalogue

W. F. & JNO. BARNES CO.

384 Ruby Street,

Rockford, Illinois.

Working Beeswax

In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500 Lbs.	300 Lbs.	100 Lbs.	50 Lbs.	25 Lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.

Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Members kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "National" also, put your mark on the packages so your wax can be recognized and mail the bill of lading also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Ffg. Co., Falconer, N. Y.; Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE NATIONAL BEE-KEEPERS' ASSOCIATION

NORTHSTAR, MICHIGAN.

Pack your wax in double sacks. Use no paper or other packing.

Friction Top Honey Pails and Cans



The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx. Capacity	Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2 lb. Can.....		\$2.25	\$2.15	\$20.00
2½ lb. Can.....		2.75	2.60	24.00
3 lb. Can.....		3.00	2.85	28.00
5 lb. Pail.....	\$5.00	4.75	4.50	42.50
6 lb. Pail.....	5.25	5.00	4.75	45.00
10 lb. Pail.....	7.00	6.50	6.25	60.00
12 lb. Pail.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gollan square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.50 per case
6 pails in a case, 10 lb. Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

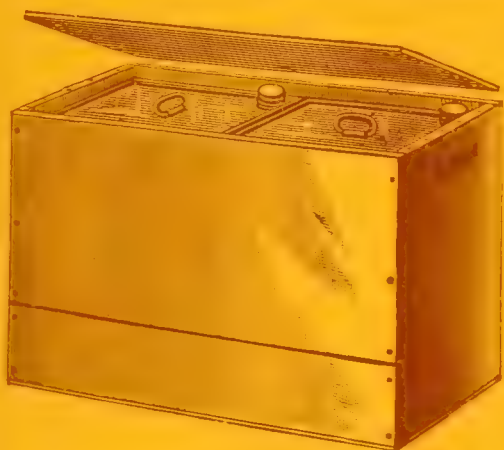
The above containers are known as "Buckets" in some localities.

Address all orders to
The National Bee - Keepers' Association
Northstar, Michigan

Tin Honey Containers of Quality, for National Members

Of standard size and guaranteed to be the best to be had at any price.

Specifications of the 60-lb. Can.



Five-gallon Square, Round-Cornered Cans, $9\frac{3}{8}$ " square by $13\frac{7}{8}$ " high, with wire handle, paneled sides and $1\frac{3}{4}$ " Cork-lined Screw Cap.

Above cans crated 50 cans in a crate, **20c** each.

Above cans cased singly with case having $\frac{7}{8}$ " ends and $\frac{3}{8}$ " sides, tops and bottoms, **33c** each.

Above Cans cased in pairs with case having $\frac{7}{8}$ " end and $\frac{3}{8}$ " sides, tops and bottoms. **60c** each

Above Cans cased in pairs as above, in lots of 250 or more cases. **\$57** per 100 cases

Above Cans in car lots of 900 to 1,000 cases. . **\$56** per 100 cases

The above 5-gallon cans with 8" screw cap, add 11c per case of two cans. Add 5c for cans cased singly, if wanted with 8" screw cap.

One gallon square round-cornered flat top syrup cans, with screw caps. The finest can in the world to sell honey direct to the consumer in, and we have had the manufacturers make us some wooden re-shipping cases, the same as those on the regular 60-lb. honey cans, so they will go by freight the same as the larger cans.

Above gallon cans in wooden case, 6 cans in a case. . **60c** per case

10 cans in a case. **95c** per case

We quote them in crates of 50, at **\$7.00** per hundred cans.

Address all orders to
National Bee-Keepers' Association,
NORTHSTAR, MICHIGAN

Gleanings in Bee Culture

==FOR 1914==

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake beekeeper whether he has but one colony, a small suburban apiary, or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY.

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT.

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES.

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance, and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING.—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES.—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies, and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS.

—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho, and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1—WINTERING.—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14, which experiments will be published in this number. We shall also give our own experience summed up as to the feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you can not afford to miss such a wealth of information as the subscription price, \$1.00, will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly



APRIL
1914

▼ ▼ ▼
NORTHSTAR,
MICHIGAN

ONE DOLLAR PER YEAR

THALE'S REGULATIVE VACUUM BEE-FEEDER

This illustration shows the special designed bottle which controls the feed on Thale's Regulative Vacuum Bee-Feeder. This feeder is designed under the latest scientific method of controlling the feed by means of Vacuum and keeping the feed at a certain level, and in reach of the bees at all times. The slide is the means of increasing or decreasing the amount of feed. (See March 1st issue.) This feeder is manufactured by the most skillful workmen, and its construction is perfect. Over 42,000 of these feeders are now in use, and some of those who have received them have re-ordered more, and have expressed their opinion that this feeder will unquestionably be the most profitable investment for the bee-keepers. The Chicago-Northwestern Bee-Keepers' Association, which was held in Chicago, Dec. 17-18, 1913, to whom I have described and demonstrated this feeder in detail and in use, gives the following endorsement:

WHEREAS, This Convention has been impressed by the exhibit of the Thale Regulative Vacuum Bee-Feeder, and believe that the same is a good device for stimulative feeding—

THEREFORE, Be it resolved, that the Chicago-Northwestern Bee-keepers' Association in convention assembled, do heartily endorse the above device as a practical instrument for the bee-keeper at large.

I. E. PYLES,
Signed ARTHUR STANLEY,
W. B. BLUME.

H. H. Thale, Maywood, Mo.
Dear Sir:—

I received the sample bee-feeder all O. K. and I think I will like it fine. Ship me 20 feeders complete and 25 extra bottles with cork valve.

Enclosed find check in settlement for same. This is quite a bee country and the main drawback has been that they don't get strong quite early enough to take proper advantage of the earliest clover blossoms.

Now, if you would like an agent in this part of the country I'm sure I can make some heavy sales for you, as I am acquainted with bee-keepers owning from 1,000 to 1,500 colonies. Please let me hear from you at once.

Respectfully, D. B. HERSPERGER.

I want over 100,000 of these feeders in use by June 1. I will ship you as many feeders as you need on ten days' free trial in your own apiary, and if these feeders do not work as represented you may return them to me at my expense, and your money will be refunded. If no money is sent, fill in and cut out Free Trial offer below and mail to me today. Address Free Trial Dept. Send for feeder circular and bee-supply catalog.

TERMS, CASH WITH ORDER

Sample Feeder, with 2 bottles complete, mail postpaid,	55c
Ten Feeders complete with 1 bottle, freight or express, each	35c
All orders over ten feeders, each, only	30c
Extra bottles with cork valve, each	10c

H. H. THALE, *Inventor and Manufacturer* **Box R25, Maywood, Missouri**

Eastern Buyers Send Orders to Earl M. Nichols, Lyonsville, Mass., and
B. H. Masters, Edison, Ohio. Western Buyers send orders to
D. B. Hersperger, Ordway, Colo.

TEN DAYS' FREE TRIAL OFFER

Please send by.....Freight; Parcel Post (send postage). Express Postoffice.....R. R. Station.....
State..... Send at once (number of feeders).....
feeders on ten days' free trial. Title of feeders to remain with H. H. THALE, of
MAYWOOD, MO., until payment in full is made or feeders returned.
How many colonies have you?..... Annual crop.....lbs.
Produce comb or extracted?..... Sign.....



Ordway, Colo., Jan. 26, 1914.



PROF. EDWIN G. BALDWIN, DeLand, Fla.
Associate Editor of the *Bee-Keepers' Review*

Each of us should make a special effort to secure at least one new member for the National each year. Have you secured yours?

Notice Change in Secretary.

The new Secretary of the National Bee-Keepers' Association elected at St. Louis is Mr. Geo. W. Williams, Redkey, Ind., to whom all correspondence pertaining to the secretary's work should now be addressed.

The Bee-Keepers' Review

Established in 1888 by the late W. Z. Hutchinson.

OFFICIAL ORGAN OF THE
NATIONAL BEE-KEEPERS' ASSOCIATION
AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, NORTHSTAR, MICH.

ASSOCIATE EDITORS:

WESLEY FOSTER, BOULDER, COLO. PROF. EDWIN G. BALDWIN, DeLAND, FLA.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII.

NORTHSTAR, MICHIGAN, APRIL 1, 1914

No. 4

The Old and New Way of Bee-Keeping Compared

Bees in Buildings Above Ground.

By J. A. PEARCE, Grand Rapids, Mich.

Author of *Pearce Method of Bee-Keeping.*

(Continued from March issue)

I SAID to the young men who were with me when we closed up the hive and tucked it up good with carpets and Higginsville cover: "There is a colony worth a \$10.00 note." And if I could, would like, with the aid of the REVIEW, to induce our fellow bee-keepers to double up the capacity of their hives, so they will be saved the annoyance of having to feed, and then they may be sure that their bees will not starve in winter or dwindle in spring; also that the hive may be large enough to allow the queen to lay to her full capacity so they will have a bouncing big colony ready when the honey harvest comes along. If we could succeed in doing this we should have the commendation of all lovers of the bee, and then if we should wield such an influence as would induce them to build suitable shelters for their bees where they would be out of the home of all these terrible storms such as we have just passed through, that have put even the railroads out of commission, they could, any day in the year, with comfort walk in and take a look at the bees and note their condition. Then an examination could pleasantly be made early in spring, long before an examination could be made outside, thus greatly

aiding us in combating foul brood, for this early and late examination and the fact that we can produce comb instead of extracted honey, should be of great help to us in combating foul brood, the only dreaded disease we have to contend with in our pursuit. I have long felt that the extractor is very blamable for the spread of foul brood.

I will be pleased to report to the REVIEW in the spring how this little colony referred to above gets through the winter in its spacious quarters, with only a single-walled hive body for protection.

This winter, with its terrible storms that have swept the continent from coast to coast, should bring bee-keepers to their senses in regard to leaving their bees exposed to the elements without shelter. A goodly number of years ago, when we had a series of storms similar to these this winter, our Michigan esteemed bee-keeper, George E. Hilton, lost his large fine apiary in Northern Michigan, although put up in the most approved manner in double-walled Hilton hives with all the details properly attended to by himself in the way of chaff cushions above and proper attention to ventilation, etc. After learning of this disaster, I abandoned all idea of any packing about hives less in size than the bee-keeper could also get inside of himself with the bees and see that they were all right, for we found that Spring after the disaster to the Hilton apiary that all of our bees here in single-walled hives in buildings above ground were alive and doing fine. I had been working along the line of putting our bees up on tables and covering them with a case something like 2½ feet high and broad, so I could keep the storms away from the hives and especially the entrances. But this I abandoned and turned my attention to the construction of a building or shell large enough so that we can work comfortably in it, and where we can raise the bees on a shelf a suitable height from the ground so we do not have to break our backs while working at them and where the outside entrance will be above the clogging of snow and ice and above toads, skunks and mice.

I wish to say that the setting of bees so close to the ground as has been practiced has been prolific of more disaster than almost anything that has occurred to bee-keeping; still it could not well be avoided without shelter. When I found that I could build a suitable house for the bees where we could handle them so comfortably for considerably less per hive than what these double-walled hives would cost extra, and very much cheaper than a cellar could be constructed for, then I was more than pleased, as these double-walled hives were a very great inconvenience in the summer management of the bees. With a bee house and single-walled hives our labor is reduced to the minimum, for there is no extra fixings in the way and no lugging of appliances from the honey house to the yard and back again, and if we are tired at night we can just quit where we are and all is safe from storms, etc.

When we think of the great comfort of working under a canopy out of the sun and wind and shut away from the warrior bees, and then think of how we used to get down by the hives outside and have the hot sun burn the back of our heads off, we can readily appreciate the value of a suitable shelter. But the shelter alone would not give us at all times a safe outfit for our bees, as it needs the double-sized hive or double-hives, one above the other, to give capacity for winter storage in the proper place above the bees, so there will be no danger of starvation, as bees left in one of our hollow hive bodies run a great many chances of starvation.

Then again, this large hive is just as essential to give full capacity for the queen to deposit all the eggs she will the fore part of the season, so if you are keeping your bees in single-hive bodies and have been fortunate in getting them through the winter alive and wish to change to our double-hive method (about May first in this latitude), just put on another hive body above your little flat hive and give your queen access to both. Then soon put on honey cases above all, so the bees will have a place to carry the honey out of this big brood chamber and you can then go about your other business without danger of swarming. Should you want increase, you can make it when you take off your white honey the last of July by setting these two hive bodies apart and ascertain where the queen is, and give a queen to the queenless body and put on an extra body on each and see that they build up good for winter; if not, feed some, so they will be sure to go through any winter safely. If you have not a shelter for them, build them one as described in February REVIEW, as you would for any other of your stock, and be sure you build it right.

Now you see how simple this all is; no new fangled appliances, only two of our 8-frame dovetailed hives of the regular size put together and this put into a building fitted for it, and it makes it possible to work for unlimited comb honey of the finest quality, and if we produce comb honey and do not extract we should conquer foul brood. By it we avoid natural swarming and it gives us the opportunity of making our increase by divisions when we are ready. It eliminates the danger of loss in winter almost wholly; it reduces our labor in caring for the bees fully three-fourths and by having our bees housed in all ordinary weather, and do not have to pick selected weather. This advantage alone would pay anyone for constructing a shelter, and it will make bee-keeping very much more pleasant in the extreme heat of the South or in the extreme cold of the North.

If you have never kept bees by this method, and very likely you have not, just try it in a small way if your faith is not large and be convinced.

Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordelia, Ga.

From 550 to 800 Colonies in Ten Apiaries.

THOUGH I had at my command eight trades and demanded good wages at either one, yet the first year of my bee-keeping life as a sole business was the first year I had ever cleared any money.

Up to this time I had just lived in a hand-to-mouth manner like all other wage-earners of my time, so my only hope for gain was bee-keeping, and the results of the first year were a good starter. No one can imagine the happy time I had planning for the next season. What I had decided on doing was all I was capitalized to do.

At this time I had learned considerable of bee-keeping for miles around and knew there was a field for a bee-supply business, and I laid in a small stock above what I expected to use in my own business. I sent out price lists to all names of bee-keepers I could obtain, and the result was that I sold about all my stock except what I had reserved for my own use. But during the winter I bought all the bees obtainable in any kind of hives within 30 or 40 miles of me, including the lot of bees the rich man had who had refused to sell them to me the previous year, and moved them all to new locations on apiary sites I had previously looked up, so I could get them shaped up for work for the coming season. Also to those three new yards I moved some bees from my other yards when I could spare them, so some increase could be made at all yards, but most of it was to be made at the home yard, where I could best look after them. I had some capital left over I did not need in my bee business, and with it I bought me a small tract of land in the edge of town and built a small home on it.

Up to this time I had made a little mistake by trying to produce honey in one-pound sections. My customers over-persuaded me to this, but it was done only in a limited way. I only took it up for a trial and it was not a satisfactory way to produce honey in my location, so I sold all my comb honey supers to a bee-keeper in Florida and entirely discontinued producing honey in this form until I could find a more suitable field for comb honey production in sections. But I kept right on producing chunk comb and extracted honey. The chunk honey I put up in different sized packages and gave my trade all it would take of it, and it was fast proving a winner.

I had plenty of supplies for the coming season except some super bodies, also bottoms and covers which I made of selected yellow pine lumber. All was put in readiness before the busy season and much

of it at the yards. My helper had some experience with bees and was coming in plenty of time for the busy season, and everything must be in order and well planned.

At this stage of my bee-keeping life I was no "spring chicken" at the business. I was well up on the subject in all lines from actual experience, so I did not set out to make a fortune or a big sum of money at it just in one season, and neither to extend my business beyond reason just in one season, for I never yet have sacrificed a honey crop at an apiary for the sake of increase except in a few cases at my home yard. Neither should any bee-keeper think of doing such a thing who expects to make the most out of his business. When it comes to increase it is the steady "knock" that counts in the years to come. Just keep up a certain per cent of increase and by and by the "goal will be reached." And let me say here that I have never had a failure in a honey crop, and I have never had what might be called a "bumper" honey crop. A year has never passed since I have been in the bee business as a specialist when I didn't clear a good per cent on my money invested. So the point is to press on at a moderate gait.

Well, when the season came on, my helper and I did not have to make near the 250 colonies increase over the yards, for I had bought bees in every kind of a hive and located them, and all we had to do was to transfer. This was done per my method, which was no task at all, and the increase we did make was in the usual manner from the strongest colonies in the apiaries, which always calls for an equaling up of colonies. This we have always held is the proper thing to do to expect best results, for the colonies which seem determined to swarm are best handled in this way. Well, the harvest as usual was good and at the close of the season the honey was all sold and 800 colonies put up for winter in good condition.

There will be only two more articles, when bee-keeping with me took an entirely different course, and many things will come up in these two articles, and let me say here that along with bee-keeping and the progress of it I have developed a market for my product, and this has been no small task, for when I first started, honey was known as an article of food to but few people who did not produce it, here in this location. In large cities it was sold mostly for medical purposes. Well, I started at home by giving several honey suppers at which fresh honey, butter and bread was served free. Those suppers were largely attended and the best articles served, with the result that my entire town and the surrounding country took to eating honey, and ever since several tons are bought by the home citizens each season. Soon I could no longer sell to the consumers, as it required too much of my time, and sales were made through the retail groccerymen here and then around at other towns. I went into the large cities with it, selling only to retailers. Soon collecting was

too much of a task for such a busy man as I was. By this time the wholesale grocerymen were interested in honey and I sold to them for hundreds of miles around. This way of disposing of my honey crop worked very well for a long time, but by-and-by the jobbers got much interested and I gradually shifted my business into their hands, where there is much less trouble collecting, but I still hold to many of my old wholesale grocerymen who have been good pay customers. I have traveled thousands of miles extending the sales of my honey, and exhibited at hundreds of fairs.

How I Sell Honey Direct to the Consumer.

By LEON C. WHEELER, Barryton, Mich.

I HAVE made a success of selling my honey direct to the consumer, and although part of my methods are such as most bee-keepers would not be able to use, still much of them could be carried out by most any one. I have made it a practice ever since I started in the business to sell all my honey to the consumer, with the exception of what the merchants sell for me, and usually about five to fifteen hundred pounds which is put up in glass and sold to fancy dealers in the city.

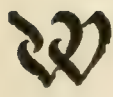
I'll tell you first how I sell honey among my neighbors. When I first went into the business I began by peddling out the honey to the neighbors, and as I was a new beginner striking in on another man's territory, I had hard work to get started, especially as I was asking two cents per pound more than the other fellow. I had the goods that would fill the bill, however, and I was not afraid to blow my own horn, so I managed to get a little sold that year and the next year it was easier. I was very careful not to sell anything that was not first class honey, and soon I had plenty of customers who were willing to pay me the extra price. Now I very seldom do any peddling, as they come to the house to get it.

Soon I began to want a wider range to my market, so I began to send honey to Grand Rapids put up in gallon cans. About the same time I commenced to exhibit honey at Grand Rapids, and I found I could sell a large amount of honey direct from the exhibit at fancy prices, so I began to make the fairs regularly. In the meantime I was building up a fine trade in Grand Rapids on a good grade of dark honey, which is worth a lot to me, as always before that was the hardest honey to sell. I have a cousin living there who works on the street railway, and he sells the honey for me, mostly to the boys on the street cars. Selling at the fairs has put me in touch with a great many men who want something good and are willing to pay a good price for it if it suits. These I keep track of and try as far as possible to supply them every year.

I have never had to do any advertising to sell all the honey I have, and nearly every year I am compelled to buy a lot of honey to supply those customers I am most anxious to keep. The first year in Grand Rapids I was compelled to get out and canvass a little, and have always thought if I ever got short on a market I should do so again until I got customers enough to take up the honey. It is no trouble to keep customers once you have secured them, if you put up only a good article. I always guarantee my honey to please, with the privilege of bringing it back if it does not.

Publicity the "Key" to the Sale of Honey.

By GEO. W. WILLIAMS, Redkey, Ind.

E have just come home from our state bee-keepers' meeting, where we had a good attendance and a splendid meeting. Much enthusiasm was manifested, and several valuable papers given. A full report will be printed and mailed to each member. We are much encouraged in the working of Honey Day. Owing to the short notice and to the fact that 95 per cent of the Indiana honey was already sold, the results were not so striking, generally, as they would have been otherwise. But we have succeeded in getting HONEY before the public in a nice way, and there have been many tons of honey moved as a result.

I believe you will agree with me that publicity is *the* thing needful just now with the bee-keeping fraternity, and that a good, live advertising specialist would be a blessing to the fellows away back from the market. But good advertising specialists come high, and the bee-keepers are conservative fellows, and from Missouri, suh! Seriously, it is more and more impressed upon me that this is the practical solution of the selling problem for the bee-keepers who are remote from market.

Here is the situation as I see it: The price of honey is too low in comparison with other articles of food, the low price being caused by the lack of proper advertising, as compared with other articles.

The consuming public is ready to respond to proper stimulation in the way of well-directed publicity, thereby stiffening the price and encouraging production. The producing bee-keepers are generally isolated and not at all acquainted with modern methods and benefits of advertising, with no considerable amount of money at hand for this purpose.

The principal part of the honey is produced away from the market.

We find the papers will give almost any amount of publicity desired to the abstract subject of "Bees and Honey" willingly and freely.

It is a psychological truth that if we get people to talk honey, they will eat honey. Then the logical conclusion would be to secure a specialist and have him give us this publicity, and let the remote fellows, who are peculiarly benefited, pay the bill by an assessment on their output or number of colonies. I am aware that a plan somewhat similar to this was tried a few years ago, but it failed for lack of a specific plan; and, without any reflections on those who so nobly gave their time and efforts to push it through, a campaign of publicity that is to cover the continent must have a well considered plan and contain the factors that will *develop enthusiasm sufficient to insure the carrying out of the plan.*

I have given this matter much consideration, and, as I said before, I feel more and more that the salvation of the honey business is to come through some such plan as this. There are so many ways that can be used to obtain publicity without cost, which are at the command of an experienced man, and which will cost nothing, and there is so little money to pay with, that this seems the only way open for an advertising campaign that is at all worth while.

What does your experience suggest in regard to taking this matter up with the National Association? Of course, the "honey day" idea is only a beginning in a series of plans to get up the enthusiasm to insure the ultimate plans being carried out.

I would like to have your opinion on this matter. We missed seeing you at the state meeting, and I did not get your paper. I suppose that you were pressed with work, but we were disappointed just the same.

EDITORIAL CORNER

My "Better Half" and I are both much interested, lately, in experimenting with honey cooking (cakes, candies, cookies, etc.) and have obtained some surprising results. For years, though, we have been enjoying a certain "Teekerle" that keeps fresh for weeks and is the most toothsome dainty we have ever tasted. We shall give the recipe soon. By the way, our exhibit of cakes, cookies, etc., made with honey, at the Orlando (Orange County) Fair last month attracted many inquiries and much interest.

While it may be true, as one recent writer remarks, that the most emphasis should be laid on *honey as a table food*, instead of honey in cooking, still there is in honey the precious quality of keeping all things made with it fresh for a remarkably long time. This feature alone is so valuable that it should be heralded from the housetops. To use honey in cooking does not mean any less honey on our bills of fare as table honey.—E. G. B.

Rather meet your debts and be done with it than keep on meeting the duns. The REVIEW debt.

We quote from a letter from Director Buchanan, Franklin, Tenn., under date of March 3rd, as follows: Bees breeding nicely here. Soft maple in bloom, though it has been pretty cold for a few days. Clover is coming on fine. Came from St. Louis down to Memphis, and have just got home from a trip through the western part of the State. Prospects look pretty good.

Trite is the saying, but true, that "It is always summer *somewhere*." Readers of the REVIEW in the frozen north (literally true at this writing, March 10th) will be even more forcibly reminded of this old adage by comparing the weather they were having at the beginning of the second week in March with the weather in Florida at that date. Orange trees are just opening their snowy buds, in the central portions of the state—in the southern extremities of the peninsula the bloom is at its height. Prospects are good this year for a fine orange honey yield, so far as condition of colonies and amount of bloom is concerned. For the past week, however, the heavy snows, even far down into the tier of states on our northern border, have given all Florida a long continued chilly spell that is very hard to combat. Brood-rearing progresses more slowly, and powerful colonies, if in eight-frame hives, can hardly hold their own, for the amount of honey left in the brood-chamber at this time is, or should be, very small. Any excess of honey is almost sure to be dark honey from the previous summer, and in the middle of orange bloom, when the queens are literally "spreading themselves," this dark honey goes up into the supers, to taint and dull the clear lemon hue of pure orange honey. Hence it is, in most localities in the state, that but little honey should be left in hives at the opening of orange bloom. For the reasons above mentioned, therefore, the protracted cool weather is very trying to the bee-keeper who is attempting to secure a choice quality of orange blossom honey, by so timing the end of the dark stores as to leave almost a honey-less hue at the opening of orange bloom.

Of late we have practiced holding enough full frames of light honey over from the previous year to be used in tiding colonies over or through just such cool periods before orange bloom. Just at this stage we have been going through the home yard and giving a heavy frame of sealed white honey to nearly every colony in the apiary, and it is a comfortable feeling to know that there are stacks of more such combs in the honey-house, ready for the same use, if need should arise.—E. G. B.

There are stings in other lines of business besides ours.

Give the boy (or girl, either) a few swarms of bees to work this season, and let him have the money he gets from them to spend as he pleases. The experience will be worth more to him than what little he might lose by not doing it as you would.

For the past season we have been using a service body on our auto (a Stanley Steamer) to transfer colonies from inland to the coast and vice versa. We have just completed the moving of all colonies on the Indian River to our home yard for the orange bloom; after that we shall move them back. All the moving has been done in this auto, with the service body capable of carrying 800 lbs. or more at a load. Results have been very satisfactory. We can carry from 10 to 14 colonies thus a distance of 45 miles and have done so in less than three hours—once, in fact, in a little over 2½ hours. We heartily endorse what Editor Root says, repeatedly, in *Gleanings*, that the light truck is proving far superior for all apiarian purposes to the heavy truck. More on this later in the season. We plan a more extensive use of the auto soon.—E. G. B.

**Prof. Edwin G. Baldwin, De Land, Fla., Associate Editor of The
Bee-keepers' Review.**

We are pleased to announce that the services of Prof. Edwin G. Baldwin, De Land, Florida, have been secured as an associate editor of the REVIEW. Mr. Baldwin being located in Florida, is in an admirable position to represent the REVIEW from a Southern viewpoint. It is a fact that bee-keeping conditions differ in the different locations, and the REVIEW is fortunate in being able to secure so capable a personage as he to represent its pages, with live matter suitable for the warmer portion of our country. With so able an associate editor in the West as Mr. Wesley Foster, and Prof. Baldwin in the South, and with your humble servant as a representative of the middle and Eastern states, the varying conditions of the different portion of the country would be very well taken care of.

We would suggest that the Southern readers of the REVIEW "roll up their sleeves" and help Prof. Baldwin out in every way possible. We feel that you of the South have not been taken care of in the past as you should have been, but this need not be the case in the future, as the REVIEW pages are now wide open to you as never before, and it will be *your* fault if you do not receive your share of recognition in future. Write your need direct to Prof. Edwin G. Baldwin, De Land, Fla., and we can assure you that it will have his best attention. The friends will recognize Prof. Baldwin's writings beginning with this number over his initials, "E. G. B."

The midwinter sub-tropical fair of Orange, Osceola, Seminole and Volusia Counties was held at Orlando, Fla., February 17th to 21st. Exhibits of fruits and trucking products, of course, were most in evidence, and though there were a few premiums offered for honey and wax, the entries were limited to three kinds—one for comb honey, one for extracted and one for beeswax. We are the possessors of two artistic blue ribbons as a reward of a small, tentative exhibit we made. Another year, we shall see the managers of the Fair in advance and try to secure more representative premium lists and more inviting premiums. We might add that we have been very much impressed with the splendid advertising possibilities of such a Fair. Our honey exhibited was sold the first day of the Fair and could have been sold many times over. Another year we shall try to exhibit a full queen-rearing outfit, a honey-extracting outfit and an instructive line of bee supplies, in addition to the honey and wax. The name, "Medea Bee Yards," in wax letters, four inches high, and the letter, attracted much attention.—E. G. B.

Points In Cell-Getting and Grafting.

We have no way of estimating how many of the readers of the REVIEW obtain cells by grafting. No doubt hundreds do so obtain them. Many more will doubtless try it for the first time this season, so it may not be unseasonable nor amiss to speak of a few details that have come by experience. For lifting the young larva from the worker-cell, have the smaller end of the cell-grafting needle slightly coated with royal jelly—then a very slight contact with the tiny larva will be sufficient to adhere and draw it up with the needle; if you don't get the larva at the *first* attempt, always try a new cell—let that one go. You will doubtless do more injury to the young queen-to-be by "fishing" for her than you will do good transferring by your efforts. Take a new cell; there are plenty more. And, besides this, you will learn sureness, become able to lift out the tiny white bit of animate life almost unfailingly. By this means you will acquire both quickness and sureness, become both dexterous and sure.

Another point: If on any day when grafting you have several big rich cells of royal jelly, in excess of immediate needs, don't discard them, but remove the embryo bees from the bee cells and then pinch the open end of the cells tight shut, place the cells thus sealed in a tight box, or glass jar, with close-fitting lid, and you will be surprised to see how well the jelly will keep. We have used it thus three days old and it is fresh and good as ever. *Good* ielly is milky white; too old it becomes yellowish and stiff—but *yellow* before it becomes *stiff*.—E. G. B.

The recent and still continuing cool period is also very hard on early queen-rearing. Our bees do most of their natural swarming during orange bloom. That is the very best time to produce fine, large cells with least effort. But if we were to wait, with cell-getting, until bees were working on the orange trees, we should lose much valuable time and golden opportunities. Made wise by experience, the alert queen-breeder will have his cells developed in his first lot of queen-cells at least two weeks before the first buds open on the orange groves; then his first virgins are ready to mate early in the period of orange bloom and under ideal conditions. There will also be more time for subsequent lots of queens, for the period of orange bloom (about four weeks at least) is short enough for successful rearing of many queens. Orange bloom there corresponds to clover bloom in Ohio, Indiana and Illinois and the north generally, for easy and profitable and sure queen-cell getting.—E. G. B.

Two pleasant hours were spent with Mr. R. A. Burnett, the well-known honey merchant of South Water street, Chicago, on my return from the National Convention in St. Louis. Mr. Burnett is the older of those doing business in honey on South Water street, having been actively engaged in the sale of honey for thirty-nine years. During his "palmy days" of early bee-keeping, when honey was sold through commission houses more than at present, his honey sales amounted to as much as seventy cars annually. As time passed on, more and more did the producer sell his honey and wax direct to the manufacturer and consumer, until at the present time the volume sold through this method has greatly fallen off. It would be hardly fair to give the producer all the credit for this long-headed move, for Mr. Burnett let it be known that the manufacturer and bakers early saw an advantage in buying direct from the producer; thus the consumer and producer were both in mutual accord along these lines, and consequently the change in methods of the disposal of the crop came about by a natural condition.

Mr. Burnett, having spent nearly a lifetime in the honey trade on South Water street, is in an admirable position to render valuable data relative to early bee-keeping conditions, and he has promised the REVIEW some articles occasionally along this line. We especially invite Mr. Burnett to tell us in an article how the baker and tobacco trade in honey was won and lost to the American bee-keeper, especially how the tobacco manufacturer was forced to use cheap molasses in sweetening tobacco instead of honey, as they prefer; why the baker prefers to buy Puerto Rican, Cuban or Southern honey instead of Northern honey, etc. The subject is of vital importance, but we will not forestall Mr. Burnett at this time by going further into the subject.

"What Is a Langstroth Hive!"

Considerable merriment was started at the St. Louis convention when President Gates inquired: "What is a Langstroth Hive?" but the fact was soon brought out that this was not something to be treated lightly, but a serious condition—that there were no standard dimensions for manufacturers to work by, and that there was actually much variation in size and shape of both the hive and frame as put out by the different manufacturers of bee-keeping supplies. A committee was appointed to confer with the different manufacturers, with a view of standardizing the Langstroth hive and frame. Since returning from the convention, it is with pleasure that we notice in a late number of *Gleanings* that the manufacturers themselves now realize this deficiency in their supplies, and are now working among themselves to standardize the Langstroth hive and frame; so we may now expect some tangible results.

You Can Do It.

"Somebody said that 'it couldn't be done,'
But he with a chuckle replied,
That 'maybe it couldn't,' but he would be one
Who wouldn't say so till he'd tried.
So he buckled right in with the trace of a grin
On his face. If he worried he hid it.
He started to sing as he tackled the thing
That couldn't be done—and he did it!

"Somebody scoffed: 'Oh, you'll never do that—
At least, no one ever has done it.'
But he took off his coat and he took off his hat,
And the first thing we knew he'd begun it.
With the lift of his chin and a bit of a grin,
Without any doubting or quiddit,
He started to sing as he tackled the thing
That couldn't be done—and he did it!

"There are thousands to tell you it cannot be done,
There are thousands to prophesy failure;
There are thousands to point out to you one by one
The dangers that wait to assail you.
But just buckle in with a bit of a grin,
Then take off your coat and go to it;
Just start in to sing as you tackle the thing
That 'cannot be done'—and you'll do it."

—Selected.

Field Notes From Iowa.

J. W. STINE, Iowa Deputy Bee Inspector.

The prospect was never better for a good crop of white clover than it has been last Fall and this Winter. There was a good growth in the Fall, and this month we are having quite a heavy fall of snow. The great need of the bee-keeper will be to watch his colonies in the Spring that plenty of honey is near the brood-nest. The great amount of warm weather during December and January took a large amount of honey, and brood rearing was carried on in some colonies to a greater extent than I ever knew of before during those months.

* * *

Mr. John Thomas tells an experience with a new swarm which was hived in the morning and a large number of bees were seen leaving the old hive late in the evening for the new swarm. Mr. Thomas also tells of a swarm of bees which had a queen that stayed in the hive all summer and never laid an egg. The queen looked normal and was a fine-looking queen, and the bees seemed to be contented with her, but became so depleted that they were united with another small colony later with a different queen.

* * *

When the warm days come which cause the bees to undertake a flight, it would be well to shade the part of the hive the sun shines on and put straw or other material in front of the hives for the bees to light on when they take their flight. A great many bees dropping into the snow are unable to make their way back to the hive again.

* * *

Quite a little alfalfa is being sown in different parts of Iowa, and this with this favorite sweet clover is receiving attention by many who are becoming acquainted with it as a fertilizer and food value for stock, and gives us two sources for honey that are a great help to the bee-keeper. These two sources of nectar, together with the fruit bloom, which enables the colonies to build up early for the clover flow in June and July, and the Fall or late flow from heartsease, Spanish needle and asters, make Iowa a good State for the production of honey.

The Secretary's Corner

GEO. W. WILLIAMS, Redkey, Ind.

A Bird's-Eye View of the Situation.

THE National Bee-Keepers' Association will endeavor in the future to push the honey business as it never has before. It will endeavor to induce every member, whether producer, manufacturer, dealer or editor, to lay aside all differences and join forces and "boost" the honey business.

The Association spirit is in the air, and we see other similar vocations prospering through harmonious combined effort.

The season coming on promises to give us an abundant crop all over the United States. California, Colorado and, in fact, the entire West, has splendid prospects; the clover belt and the East also report promising conditions; and to reap the full measure of this prosperity we must stimulate the market so that it will absorb this crop and still hold the price as it is, or better.

For this purpose the Association is formulating plans of publicity in which every honey producer from the largest to the smallest, every bee journal, every supply dealer and manufacturer, and all who are interested in getting better prices and an increased consumption, can work together harmoniously.

And to work out these plans, we can profitably use all the brains, time, money and energy we can command. You will be called on frequently to contribute some of these to the general fund. Our circumstances make it necessary that each of us give his full share whenever called upon, as we have no other source of income at present; but the enthusiasm and determination of the bee-keepers will more than make up any lack of a big fund of mere money.

The first plan to be taken up will be to arrange for a general "Honey Day" to be observed over the country, and co-operate with the local Associations, to fill the papers with honey news telling about it and getting the grocers to stock up for the occasion.

In the meantime, take your local editor into your confidence and show him your bees; do not forget to sweeten him up with a little honey occasionally, and keep giving him something new in honey talks to print. It is good "stuff," as the printers say, and they are glad to get it.

Arrange to put a neat placard in each case of honey packed, no matter for what market. This, if persisted in, will sell many pounds in each grocery.

Talk honey to everybody who will listen, and write about it to your agricultural papers. They are anxious to have it.

People nowadays eat the things that are advertised. Advertise honey sufficiently, and we can not supply the demand at twice the present price. There are several millions of persons who did not eat a pound of honey last year, but who will eat several this, if they are told about it in the right way.

* * *

Save that old comb and render it up, as wax will be wax this season, and foundation is soaring.

* * *

And now for a general *honey day*. When shall it be? Do not all speak at once.

There is nothing surer than that we are at the beginning of the greatest prosperity the industry has ever seen, and it is coming through increased consumption and better demand, which will bring better prices.

This is the history of a number of similar vocations. Organization and efficient publicity has been the means of helping several from ruin, and it is just what we need. When we get *all* the producers in with us, and all boosting the price, demand will be such that the price will raise not only one cent but several. Join the Association and "Boost Altogether."

* * * *

There has been a feeling for some time that we were not getting value received from the National Association. This is not to find fault, as I personally have had my money's worth, but I am simply stating a fact as I find it.

At present no one really has any reason to complain, for we are getting the REVIEW, in itself worth all the money paid, and then some; to those who are isolated and use quantities of supplies, the brokerage opportunities given are worth something, and the social and educational features appeal to many to whom the above features may not.

But there is another feature that must be carried on also, and it is one that is close to all of us, as it appeals directly to our pockets. This is the publicity work. More honey sold at a better price puts more money in the pocket of everybody in the business—the producer, the honey dealer, the supply dealer, the supply manufacturer, the bee journals and all the rest.

One wing can not do much alone as it is by associated effort that these big things are done.

This is one thing upon which we can all agree: We *all* desire a better market and a stiffer price. It is a matter of business. Double the consumption and that means bigger profits to all. "Knocking" the other fellow is out of date. Modern business is not carried on that way. "Boosting" is what does things. If you have a grouch, sweeten up and "boost" with the rest of the boys.

We are going to "boost" for all we are worth. We can use *you* (this means everybody). Just what your work will be depends on yourself. We want Editors for Honey Departments in Agricultural papers; we want the Editors of the Bee Journals; we want honey demonstrators at every fair and department store; we want every manufacturer, dealer and producer; we want *you*—all of you. We want energy, brains and money. When we get going right there will be no complaint about not getting your money's worth, for people will begin to realize that we are on the earth. We can put honey right to the front. The harder we boost the quicker we will get there.

At the St. Louis meeting it was proposed to lift the REVIEW debt, and do it as soon as possible. One big-hearted brother offered to start with \$25.00 if it could be done this season. Another offered \$10.00, another \$5.00, and others different sums. Send on your money, brothers, but do not tie any string to it. We will pay it off and get it out of the way, but let's get rid of it.

* * *

Look out for Foul Brood in the dead and dying colonies this time of year. More colonies become infected this way than any other.

* * *

Some of the trade associations have large sums of money behind their publicity work. We have something better. We have an editor whose services to the bee-keepers are worth more than money, an official organ of our own, and an abundance of enthusiasm.

* * *

One of the breakfast food concerns spends the big end of a million dollars yearly in advertising a product that, while it is perfectly harmless, only costs two or three cents per package and sells for 15c. Put the same per cent behind the sale of honey, and see where the price would go. Think we could produce enough to supply the demand?

* * *

Has any one any *good* and tried ways of using honey in baking? My wife has never had much success with it. If you have any that you can swear by, send them along; I would like to try them and pass them around.

* * *

A paper was read at St. Louis urging that low prices are necessary so that people will buy and eat lots of honey. A sort of endless chain, as it were, to no price at all. Lower the price to sell lots of honey, increase the production to get enough money to live on so that we can sell more honey for less money, and again increase the production to get enough money to live on, etc., etc., and meantime the *price* is lost in the shuffle. It reminds me of the old verse:

The little fleas that do us tease
Have lesser fleas to bite 'em.
These in turn have smaller fleas,
So on--ad infinitum.

It would take a very powerful instrument to find either the little fleas or the profits of such a system of business. I will bet a dried apple to a gooseberry that the man who wrote this article does not have to work from 4 a. m. until 8 p. m., when the mercury is trying to climb out at the top of the thermometer. When one does, he is keen after the added penny that publicity brings.

I receive letters every day asking, "Why should I join the Association?" or, "As I only have a few bees, how will it benefit me to join?" These are perfectly proper and legitimate questions, and I will try to answer them.

I will begin by asking some myself: Is it not a fact that well-directed, associated, persistent effort is more efficient than the same amount of divided, conflicting, individual effort? Every producing bee-keeper has honey to sell and supplies to buy. Can we not buy better if we can arrange to pool our purchases? Can we not sell better if we combine in advertising our product to stimulate the demand so as to raise the price a little? If this increased demand gives us a single cent per pound advance, the little producer who only sells 200 pounds has made 100% on his investment. Suppose there was no organization, and every man put his honey on the market as best he could, some markets would be overstocked and demoralized, and prices would go to smash, while other markets would be bare and suffer for lack of a supply.

Drifting Bees and Foul Brood.

By E. C. BIRD, Boulder, Colo.

I WILL give you a little of my experience with drifting bees and foul brood. While working in Utah I made up 200 three-frame nuclei, one of which was placed at the end of a row of hives and quite close to the hive next in the line. This next hive was a regular hive body and extracting super. While I was working in the yard one day a swarm issued and after circling round returned to the hive and settled—some on the other hives near and many upon the nucleus. The nucleus was foul, being built up from foul brood combs having queen cells. I knew it to be foul, and feared for the result as soon as I saw them entering there.

Well, the next time I worked that two-story hive I found it foul, as I suspected, and I am certain it was clean before it swarmed. Now I think it is a warrantable conclusion that bees which entered the nucleus box afterward returned to the old stand and carried the infection with them.

So it may occur that bees from a foul colony, on account of wind or accident may drift into some other hive near or even at some distance and may inadvertently infect that hive, there being no attempt to rob. If infected colonies are allowed to go untreated a few days, they should be carefully segregated, for drifting bees, either from or to, will likely cause trouble.



THE WISCONSIN STATE BEE-KEEPERS' ASSOCIATION
Convention held in the Capitol Building, Madison, Wis., February 3d and 4th, 1914

The National Bee-Keepers' Association

And its Affiliated Associations

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Affiliated Associations and Their Secretaries.

ARIZONA HONEY EXCHANGE.....
.....G. M. Frizzell, Tempe, Ariz.
ADIRONDACK—H. E. Gray...Fort Edward, N. Y.
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CHICAGO-NORTHWESTERN—L. C. Dadant..
.....Hamilton, Ill.
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Burton N. Gates.....Amherst, Mass.
IDAHO—R. D. Bradshaw.....Notus, Ida.
TWIN FALLS—C. H. Stinson..Twin Falls, Ida.
IDAHO HONEY PRODUCERS' ASSN.—F. C.
Bowman.....Idaho Falls
ILLINOIS—Jas. A. Stone..Rt. 4, Springfield, Ill.
INDIANA—Geo. W. Williams, Redkey, Ind.
IOWA—S. W. Snyder.....Center Point, Iowa
KANSAS—O. A. Keen.....Topeka, Kans.
MASS. EASTERN SOCIETY OF BEE-KEEPERS..
..Leslie A. M. Stewart, Franklin, Mass.
MICHIGAN—O. H. Schmidt.....
.....Rt. 5, Bay City, Mich.
MINNESOTA—Dr. L. D. Leonard.....
..515 Syndicate Bldg., Minneapolis, Minn.
MISSOURI—J. F. Diemer.....Liberty, Mo.
NEW JERSEY—E. G. Carr....New Egypt, N. J.

N. CALIFORNIA—Alwin P. Heim.....
.....Box 16, Fair Oaks, Calif
N. MICHIGAN—Ira D. Bartlett.....
.....East Jordan, Mich.
OHIO—E. R. KING.....Creola, Ohio
OREGON—H. WILSON.....Corvallis, Ore.
PECOS VALLEY—Henry C. Barron.....
.....Hagerman, New Mexico
PENNSYLVANIA—H. C. Klinger, Liverpool, Pa.
PUERTO RICO—J. W. Van Leenhoff,.....
.....Ponce, Puerto Rico, 11 Marina St.
SOUTH IDAHO AND EAST OREGON—R. D.
Bradshaw.....Payette, Ida.
TENNESSEE—J. M. Buchanan, Franklin, Tenn.
TEXAS—Willis C. Collier, Box 154.....
.....Goliad, Texas
VERMONT—P. E. Crane.....Middlebury, Vt.
VINTAH BEE-KEEPERS' ASS'N—E. J. Winder,
.....Vernal, Utah
WASHINGTON—J. B. Ramage.....
.....Rt. 2. N. Yakima, Wash.
WISCONSIN—Gus Dittmer.....Augusta, Wis.
WORCESTER COUNTY—J. S. Whittemore..
.....Leicester, Mass.

New Affiliated Associations.

Last month we added Puerto Rico as an affiliated Association of the National, with J. W. Van Leenhoff, Ponce, Puerto Rico, 11 Marina St., Manager, and this month we are pleased to announce another addition, that of the Vintah Bee-Keepers' Association, Vernal, Utah, E. J. Winder, Secretary.

The Twenty-third Annual Meeting of the Connecticut Bee-Keepers' Association

will be held in the old Senate Chamber, State Capitol, Hartford, Conn., Saturday, April 18, 1914.

Election of officers and appointment of committees.

Dr. Herbert E. Stockwell, of Stockbridge, Mass., ex-President of The Berkshire County Bee-Keepers' Association, will address us upon the subject, "The Theory and Significance of Immunity, *i. e.*, of Resistance to Disease, as Applied to Bees."

Dr. Stockwell comes to us well recommended as a fluent and forceful speaker, and we hope every member will make a special effort to hear him. Other features of the program are:

"How to Save Money in Buying Hives and Fixtures."

"Every Man His Own Inspector; Latest Methods of Treatment," with demonstrations, by Inspector Yates. Inspector Coley will open discussion upon the subject.

"Management of a Comb Honey Apiary to Prevent Swarming," by L. C. LeMay.

Discussion, "Smoke Introduction of Queens," to be opened by Rev. D. D. Marsh.

"Advantages of a Let-Alone-Hive and How to Manage." Demonstration by Allen Latham.

"Comparative Merits of 8-Frame and 10-Frame Hive for Comb Honey in locality of Connecticut." A. W. Coley.

Please bring for display and demonstration any invention, implement or method you may have. Space and tables will be provided for same. A special invitation is extended to fruit growers to attend.

The question box will be free to all.

L. WAYNE ADAMS, Secretary.

15 Warner St., Hartford, Conn.

NATIONAL GRADING RULES

Adopted at Cincinnati, Feb. 13, 1913.

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these three respects that any section shall be representative of the contents of the case.

I. FINISH:

1. *Extra Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. *Fancy*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. *No. 1*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. *No. 2*—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. *Heavy*—No section designated as heavy to weigh less than fourteen ounces.

2. *Medium*—No section designated as medium to weigh less than twelve ounces.

3. *Light*—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched up sections; sections weighing less than ten ounces.

CHICAGO, ILL.—The cold weather of February helped the sale of honey, especially that of comb, so that the market is now practically cleaned up on all grades of comb honey, a situation which sixty days ago was quite unlooked for. Fancy grades are selling at from 14c to 15c per lb., the off grades are also finding a market with very little being offered. Prices range from 8c to 13c per lb. Extracted

is weak with the best white clover and basswood bringing from 8c to 9c per lb., with other white grades from 7c to 8c per lb. The demand for beeswax has been very active and brings from 32c to 35c per lb., according to color and cleanliness.

R. A. BURNETT & CO.

March 18.

KANSAS CITY.—The supply of comb honey is still large; demand fair. The supply of extracted moderate; demand fair. We quote as follows: No. 1 white comb, 24 sec. per case, \$3.75 to \$3.85; No. 2 white comb, 24 sec. per case, \$2.50 to \$2.60; white extracted, per lb., 8 to 8½c; dark and amber, per lb., 7c to 7½c; beeswax, per lb., 25c to 30c.

C. C. CLEMONS PRODUCE CO.

March 16.

DENVER, COL.—Our local market is still well supplied with honey and our jobbing quotations are as follows: Strictly No. 1 white, per case of 24 sections, \$2.70; choice, \$2.57; No. 2, \$2.43. Extracted, white, 8c to 9c; light amber, 7 to 7½c. We are in the market for beeswax and pay 32c cash per pound and 34c in trade, delivered here.

THE COLORADO HONEY PROD. ASSN.

March 16.

National Members Having Honey for Sale.

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ills.
A. J. Diebold, Seneca, Ill.
Wm. Marshall, Carpentersville, Ill.
W. T. Sherman, Elkhorn, Wis.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint—Cotton Blend.

Wilmon Newell, College Station, Tex.

Raspberry

Geo. H. Kirkpatrick, Rapid City, Mich.
P. W. Sowinski, Bellaire, Mich.
F. D. Stephens, Box 383, West Branch, Mich.

Alfalfa

A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander, Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.

Amber

G. Frank Pease, Marshall, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKee, Velasco, Texas.
L. O. Brainard, Lone Rock, Wis.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.

Guirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.

Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.

Mesquite.

Arizona Honey Exchange, Tampe, Arizona.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franksville, Wis.

Clover and Basswood blend

Elias Fox, Union Center, Wis.
Dr. C. G. Luft, Fremont, Ohio.
Frank Kittinger, Caledonia, Wis.

White Clover

E. F. Smith, Chadwick, Ill.
B. F. Schmidt, North Buena Vista, Iowa.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co. Wis., No. 19.
E. H. Canfield, Carson City, Mich.
Byron S. Hastings, Rt. 5, Brookville, Ind.
S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
Orville Safford, Fort Edwards, N. Y.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snyder Bros., Center Point, Iowa.
Dr. C. G. Luft & Son, Fremont, Ohio.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, La Mars, Iowa.
A. S. Crotzer, Lena, Ill.

W. H. Pearson, Mitchellville, Iowa.
 John S. Coe, Boyce, Va.
 M. H. Lind, Baders, Ill.
 Frank Kittinger, Caledonia, Wis.
 W. E. Forbes, Plainwell, Mich.
 Wm. E. Prisk, Mineral Point, Wis.
 R. V. Langdon, Rt. 5, Baraboo, Wis.
 Quirin-The-Queen-Breeder, Bellevue, O.
 Niels A. Nelson, Dike Iowa.
 Geo. E. Capwell, Cottonwood Falls,
 Kansas.
 L. O. Brainard, Lone Rock, Wis.
 A. H. Fralick, Homer, Minn.
 Joseph Kurth, Mineral Point, Wis.

Charles Lotz, Monroe, Iowa.
 Bell E. Berryman, 2308 20th Ave., Cen-
 tral City, Nebr.
 Geo. W. Woodhull, Kinde, Mich.
 J. H. Haughey, Berrien Springs, Mich.
Mangrove, White as Clover
 A. F. Brown, Hawks Park, Fla.
Partridge Pea
 J. J. Wilder, Cordale, Ga.
Buckwheat
 Jas. McNeill, Hudson, N. Y.
 E. A. Duax, Chippewa Falls, Wis.
 Wilmer Clarke, Eastville, N. Y.

Notice to Secretaries.

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we were very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the REVIEW from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	103
Gus Dittmer, Wisconsin	19
E. R. King, Ohio.....	17
E. J. Winder, Utah.....	14
P. E. Crane, Vermont.....	13
H. E. Gray, New York.....	13
E. G. Carr, New Jersey.....	12
Dr. L. D. Leonard, Minnesota.....	10
J. S. Whittemore, Massachusetts.....	9
J. W. Van Leenhoff, Puerto Rico.....	7
S. W. Snyder, Iowa.....	8
Geo. W. Williams, Indiana.....	7
O. H. Schmidt, Michigan.....	3
C. H. Stinson, Idaho.....	2
J. F. Diemer, Missouri.....	2
H. Wilson, Oregon	2
Alwin P. Heim, California.....	2
F. C. Bowman, Idaho.....	2
Henry C. Barron, New Mexico.....	2
Willis C. Collier, Texas.....	1
B. N. Gates, Massachusetts.....	1
L. C. Dadant, Chicago Northwestern.....	1

The Review Debt Subscription List.

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we *must have* many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$14.75
G. A. Barbisch, La Crescent, Minn.....	.50
Martin Wachter, Hinsdale, Ill.....	1.00
Chas. J. Doppel, Fredonia, Wis.....	.50
J. R. Marlow, Weiser, Idaho.....	1.00
Geo. W. Williams, Redkey, Ind.....	.50
E. J. Baxter, Nauvoo, Ill.....	.50
F. X. Arnold, Deer Plains, Ill.....	5.00
W. B. Moore, Altona, Ill.....	1.00
D. C. Polhemus, Lamer, Colo.....	.50
J. H. Stoneman, Blackfoot, Idaho.....	.50
F. A. McCurdy, Van Nuys, Calif.....	.50
E. E. Sherwood, Wurtsboro, N. Y.....	.25
Carey W. Rees, Pearsall, Texas.....	1.00
R. Bolt, Fulton, Ill.....	.25
John L. Sims, Williamston, Mich.....	1.00
James McKenzie, Blaine, Mich.....	.50
Wesley Foster, Boulder, Colo.....	5.00
John A. Johnson, Pomeroy, Iowa.....	1.00

Subscriptions to the REVIEW debt are not coming as fast as we anticipated; still, we have at this writing \$65.25, the last month's contribution being the largest yet, which is very encouraging. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the May REVIEW. We feel proud of the above list. It is the largest one yet, and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we should like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

THIS AND THAT

If an animal works for you or is of value to you, you owe it good treatment. If you do not pay the debt by good care of it, you cheat a helpless animal of its pay.

Williamston, Mich., Feb. 27, 1914.
BEE-KEEPERS' REVIEW,
North Star, Mich.

I enclose one dollar to be applied on the REVIEW debt. I like the present regime regarding it and I hope the debt will soon be wiped out.

Very truly yours,
JOHN L. SIMS.

An Irish farmer was showing his stock of bees to a Yankee, when the latter sarcastically remarked:

"Look here, boss; the darned bees in this country are too small to be any good. Why in America we've got 'em as big as turkeys."

"Begorrah," said the farmer, "they must be devils intirely. But how do they get into the hive?"

"Wa'al, I guess," drawled the Yank, "that's their own business."—*Farm and Home, London.*

Attached as a post script to a letter of recent date from Mr. L. W. Avant, Atascosa, Texas, we read as follows:

By the way, what would you think of an extracting frame that enables us to convert a 20 B two-frame extractor (26" diam.) into a six-frame extractor that requires no reversing of frames? I demonstrated the work of such an extractor to a number of bee-keepers a few days since. You will probably hear more of this a little later.

[One would hardly know what to think about a frame that will do all you claim for it without further explanation.—Ed.]

Glidden, Iowa, March 2, 1914.

Editor REVIEW:—My bees are wintering fine; all in the cellar (120). I harvested 12,000 lbs. last year from 95 colonies. My honey is all sold with an automobile.

Yours respectfully,
W. W. LESTER.

Small Yellow Sweet Clover.

An Indiana correspondent writes:

"I can purchase melilotus indica for \$6 per 100 pounds. Would this be of value to use in a pasture seeding? How would it be to sow with oats for plowing under in the fall? Would it be of value to sow in corn with rape at the last cultivation, when the corn is to be hogged down? How much growth would melilotus alba probably make plowed under with oats in the fall? How does melilotus alba comport with red clover in getting a stand?"

The melilotus indica, or small yellow sweet clover, is an annual which grows only a foot or two high. From what we have seen of it in the corn belt, this plant is practically worthless. It would be of some value to seed with oats for plowing under in the fall, but the common white sweet clover, or melilotus alba, would almost certainly be more satisfactory, even though the seed proved to be much more expensive. Ordinary white sweet clover seeded with oats in the spring, will in a favorable season grow high enough by fall to make a hay crop of one or two tons. The amount of growth, however, depends upon the season, the richness of the soil, and the thickness of the oat seeding. It should be as easy to get a stand of white sweet clover as of red clover, provided the sweet clover seed used is of as good quality as the red clover seed. Unfortunately, there has been much poor quality sweet clover seed on the market.—*Wallace Farmer.*

When sending in your renewal for the REVIEW, kindly ask your neighbor bee-keeper to subscribe with you.

Those wanting to try those gallon packages to mail direct to their customers should order them early, as we anticipate a large demand for them. Shipped from Detroit, Mich., at \$11.00 per 100, crated, 50 in a crate, to go by freight. Address

NATIONAL BEE-KEEPERS' ASSN.,
Northstar, Mich.

Subscribe for The Review

Editor REVIEW:—Enclosed you will find one dollar. Please renew my subscription to the REVIEW. Am very much pleased with it and wish it and all connected with it a grand success and a happy new year. Ionia, Ionia Co., Michigan, was my birthplace. Born in 1851, and lived in Ionia until about 40 years old, so when I receive a copy of my REVIEW it is hearing right from home. When one is isolated as I am, and sees no one for days that speaks your native tongue, it soon gets so one appreciates a word from home. Our bees are storing very fast at present, and will for two months more. I have a thousand swarms.

Yours,

H. H. ARNOLD,

Trinidad, Cuba.

YOU ARE INVITED TO JOIN THE "NATIONAL."

Classified Department.

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX.

WANTED.—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE.—Clover Comb and Extracted Honey. Address A. J. DIEBOLD, Seneca, Ill.

WANTED.—Five or six tons of amber and buckwheat extracted honey. HENRY J. ZINN, 1135 Wyo Ave., Forty Fort, Pa.

FOR SALE.—5,000 lbs. extracted honey in 60-lb. cans; also 55 cases comb (mostly white clover). JOHN OLSON, Davis, Ill.

FOR SALE.—Bee-Keepers' supplies, honey and bees. Write for price circular. A. E. BURDICK, Sunnyside, Wash.

FOR SALE.—A blend of White and Alsike clover seed; also light amber Aster honey. N. O. WALKER, Franklin, Tenn.

BEE-KEEPERS—If you are interested in Double-walled Hives, write for our free catalogue. THE L. F. HOWDEN MFG. CO., Fillmore, N. Y.

FOR SALE.—A blend of very light amber white and sweet clover honey at 9c a pound. Four cases or more at 8½c a pound. Sample, 5c. A. J. DIEBOLD, Seneca, La Salle Co., Ill.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED.—Comb, extracted honey and beeswax. R. A. BURNETT & Co., 173 So. Water St., Chicago.

FOR SALE—Extra fine extracted clover honey. Have had no better in 25 years. Tiered up and well ripened before extracted. It is in new 60-lb. (net) square cans, two in a box. Price on request. DR. C. G. LUFT & SON, Fremont, Ohio.

FOR SALE.—White Clover Honey, none better. In 10 lb. pails, six in a case, at \$6.50 per case; 5 lb. pails, 12 in a case, at \$7.00 per case; ½ lb. glass jars, 24 in a case, at \$2.80 per case. Sample, 4c. HENRY STEWART, Prophetstown, Ill.

HONEY

Finest White Clover Extracted Honey, in 10-pound friction top pails, 6 pails in a wooden shipping case, at only \$6.50 per case. Same, Amber, at \$5.00 per case. All f. o. b. Kinde. Address

Woodhull Honey Co., Kinde, Mich.

BEEES AND QUEENS.

FOR SALE—100 Colonies Bees. Address W. H. STANLEY, Dixon, Ill.

WANTED.—100 colonies of bees in lots of 25 or more. J. VAN WYNGARDEN, 10829 Wabash ave., Chicago, Ill.

WANTED.—To buy bees. Give full particulars and prices. WM. DAVENPORT, 2201 Pioneer Road, Evanston, Ill.

BEEES by the pound, without comb, \$1.25; ½ lb., 75c; queen, Italian, \$1.00. ROSEDALE APIARIES, Big Bend, La.

FOR SALE.—15 colonies Italian bees in Danz hives. Combs drawn on full sheet foundation. Write LEON MORRIS, Elizabethtown, Ind.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on nuclei for May delivery. We have Moore's strain of Leather-colored Italians. OGDEN BEE AND HONEY CO., Ogden, Utah.

QUEENS by return mail. Tested, \$1.00 each; untested, 75c; \$7.00 per doz. Three-band Italians only. No disease, and satisfaction guaranteed. J. N. K. SHAW & Co., Loreauville, La. (Iberia, Pa.)

FOR SALE.—Three-banded and Golden Italian queens and bees that are gentle, prolific and the best of honey getters. Also bees by the pound and half pound, and nuclei. Circular on request. L. & H. APIARIES, Clarkston, Mich.

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c. E. E. MOTT, Glenwood, Mich.

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

FOR SALE.—240 colonies bees and everything necessary to work them in three yards for extracted honey. Also, 120 acres of good land in a desirable location, for bee-keeping and farming. Prices upon application. Address E. S. FROST, Route 3, St. Louis, Mich.

SAVE THAT QUEENLESS COLONY! We can furnish, by *return mail*, vigorous tested Queens for \$1 each. No disease. Satisfaction guaranteed. Untested Queens, ready April 15, \$9 per dozen; \$1 for single Queen. Three-band Italians only. J. W. K. SHAW & Co., Lereauville, La.

TRY MURRY's strain of 3-banded Italians. No better honey gatherers anywhere. Queens reared by latest scientific methods. Eighteen years' experience in queen-breeding. Prices: Tested, \$1.00 each; Untested, 75 cents each. Reduced prices after May 10th. Also bees by the pound after that date. H. D. MURRY, Queen-breeder, Mathis, Texas.

QUEENS bred from Doolittle's best stock, untested 60c each, \$6.60 per doz., \$50 per 100. Same stock of one-year-old queens removed from our colonies to prevent swarming, 50c each, \$5.40 per doz., \$40 per 100. Delivery guaranteed. Nuclei, 2-frame, \$1.50; 3-frame, \$2.00. Add price of above queens wanted. We have a rare bargain of an apiary of several hundred colonies of bees for sale on easy terms. Particulars on request. SPENCER APIARIES Co., Nordhoff, Cal.

DIXIE SWARMS direct to you in April. Stop and think for half a minute what a small package of bees or nuclei would do if put on these unoccupied combs early in the spring. The cost is just a drop in the bucket and your 1914 honey crop may be doubled. Bees by the pound, queens and nuclei shipped during April. Carefully selected stock. Excellent express and mail service. *Prices low.* Save money by writing at once for our price list and estimate on your order. CONNEAUT LAKE BEE Co., Mel-drum, Georgia.

FOR SALE.—A limited number of very carefully reared Italian queens. Original stock from Moore and Doolittle. Let me book your order now, then mail your queens during spring and summer. A limited number of tested and breeding queens for spring delivery at the following prices: Tested, at \$2; selected tested, at \$2.50 each; breeders, the very finest, at \$5 each. Untested, June and later, at 90c each, or \$9 per dozen. Orders filled in rotation as booked. Get on the list early to be sure of your supply of queens. R. A. SHULTS, Rt. 3, Cosby, Tenn.

MISCELLANEOUS.

HONEY LABELS.—Catalogue and prices free for the asking. PEARL Co., Clintonville, Ct.

FOR SALE—Motor Cycle. Telephones. Address E. PRESSLER, 1726 Armitage Ave., Chicago, Ill.

WANT TO SEND YOU our catalog and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. Co., Greenville, Tex.

FOR SALE.—Sheep shearing machine, No. 1 condition. Will trade for honey. ROUTE 1, Box 47, Ghent, Minn.

YOUR NAME AND ADDRESS on 100 envelopes, 30c; on 100 sheets writing paper, 30c. All postpaid. PEARL Co., Clintonville, Conn.

FOR SALE.—Flemish Giants Rabbits, \$3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats, 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson, Mich.

TO EXCHANGE FOR EXTRACTED HONEY—One Wheel-hoe with Seeder; one Spray Pump; one Cider Mill. All high-grade articles, used very little. Write for particulars. JOHN E. MILLER, 44 Broad St., New York City.

YOUNG MAN, 24, good character, inexperienced, wishes to learn the bee-keeping business during the coming season with a successful bee-keeper. Kindly send proposition. GEO. SCHWARZBACH, 53 Forest St., Montclair, N. J.

FOR SALE—Hive Bodies, 10-frame size, made of white pine, joints halved, frame rabbet $\frac{5}{8}$ in. or $\frac{7}{8}$ in. deep, no nails included. Price of 10-hive bodies in flat, \$3.60. H. F. MAEDER, Route 4, West Bend, Wis.

FOR SALE—Rose Comb Brown Leghorn eggs for hatching, 15 eggs, \$1; 100 eggs, \$2.50. Great layers. Also Red Raspberry plants, Cuthbert and Early King. Price, \$1 per 100. FRANK RASMUSSEN, Greenville, Mich.

FOR SALE.—Fifteen Little Wonder Bingham Smokers at the exceedingly low price of 45c each, or three for \$1.20. The smokers can go by parcel post by including postage for two pound each. Also 2,000 $3\frac{3}{4} \times 5 \times 1\frac{1}{2}$ " and 500 $4\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{2}$ " plain sections at \$2 per thousand. Address MRS. W. Z. HUTCHINSON, 1122 Detroit St., Flint, Mich.

FOR SALE.—The Weaver Automatic Honey Extractor. It reverses at full speed, is simple and positive, saves 50% of labor, and at the same time increases the output 50%. A four-frame will do the work of an eight-frame. Everyone in the market for an extractor send for full particulars. WEAVER BROTHERS, Richmond and Falmouth, Ky.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE.—Two dozen mailing cases, bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

RANCH FOR SALE.—Twenty acres, 2½ miles from Twin Falls, Idaho. Good apiary section—good crop of honey this year. Fifteen acres 4-year-old apple trees; alsike clover sown in orchard. With or without 50 colonies of bees, or will sell 80 acres mostly in sage brush 22 miles west of Twin Falls. Must sell one place at once. Address Box 48, R. 3, Twin Falls, Idaho.

FOR SALE.—We will move our bees from the north yards here to Northstar in the Spring. By doing this we find we have more tools and supplies than is necessary to work them all here in this one location, so will offer for sale one 4-frame Automatic Extractor, one 4-frame Novice Extractor, one 2-frame Novice Extractor—Root's make, two Peterson Capping Melters, one Bune Capping Melter, one home-made Capping Melter, 40 Miller Feeders, two Section Foundation Fasteners, one Hubbard Press. E. D. TOWNSEND & SONS, Northstar, Mich.

Ypsilanti, Mich., Feb. 14, 1914.

Editor REVIEW:—Please take my name from list of members having honey for sale in the REVIEW, as I am entirely sold out and am tired of answering inquiries from buyers to that effect.

Yours truly,
FLOYD MARKHAM.

NATIONAL WRITING PAPER AND ENVELOPES FOR MEMBERS.

Containing Member's Name and Address, Also Return Card on Upper Left Corner of Envelope.

These letter heads, as formerly furnished, contain the names of the officers and directors of the National and their postoffice address, etc.

Use printed letter heads and do business like business men when selling your crop of honey next fall.

The National, by buying in large quantities, are able to quote 200 sheets of paper, 8½x11," at \$1.00; 200 envelopes, 3½x6½, at \$1.00. Kindly enclose extra for postage on three pounds to go by parcel post from Owosso, Michigan.

Address all orders to

The Bee-Keepers' Review
NORTH STAR, MICHIGAN.

BOOKS ON PRACTICAL BEE CULTURE.

Parcel Post—Include postage as weight indicates.

A B C and X Y Z of Bee Culture, cloth	\$2.00	4 lbs.
A B C and X Y Z of Bee Culture, half leather	2.75	4 lbs.
A B C and X Y Z of Bee Culture, German ed.	2.50	3 lbs.
A B C de L'Apiculture French ed..	2.00	3 lbs.
Advanced Bee Culture, W. Z. Hutchinson	1.00	2 lbs.
Biggle Bee Book.....	.50	
British Bee-keepers' Guide-book, Cowan	1.00	1 lb.
Cook's Manual of the Apiary.....	1.15	2 lbs.
Doolittle's Queen-rearing .....	.75	1 lb.
Fifty Years Among the Bees, C. C. Miller	1.00	2 lbs.
First Lessons in Bee-keeping.....	.50	
Honey-bee, The—Cowan	1.00	1 lb.
How to Keep Bees—Mrs. Comstock.	1.00	2 lbs.
Humble Bee, The—F. W. L. Sladen	3.25	
Irish Bee Guide, Rev. J. G. Digges	1.00	1 lb.
Langstroth, rev. by Dadant, cloth..	1.25	2 lbs.
Modern Bee-farm, S. Simmins.....	2.00	2 lbs.
Practical Bee Guide.....	1.00	
Quinby's New Bee-keeping.....	1.00	2 lbs.
Wax Craft	1.00	
Increase Forcing the Queen to Lay; each .....	.25	2c
French edition, separate.....	.50	2c

POPULAR BOOKS ON BEE CULTURE.

Bee People, The, Margaret W. Morley	\$1.50	2 lbs.
Children's Story of the Bee.....	2.00	
Honey-makers, The, Margaret W. Morley	1.50	2 lbs.
Life of the Bee, Maeterlinck.....	1.40	2 lbs.
Bee Master of Warrilow, The—Edwards .....	.57	1 lb.
Lore of the Honey Bee.....	2.00	
Queenie .....	.75	
Bee Models...each 50c; 2 for 75c		
Ten-cent Library Booklets.....	.10	
Gleanings Library		
..50c each, 3 for \$1, 5 for \$1.50		

RURAL BOOKS.

A B C of Carp Culture.....	\$0.30	1 lb.
A B C of Potato Culture, paper....	.57	1 lb.
A B C of Potato Culture, cloth....	.85	1 lb.
A B C of Strawberry Culture, paper	.50	1 lb.
A B C of Strawberry Culture, cloth	.75	1 lb.
Tomato Culture .....	.40	1 lb.
Tile Drainage, W. I. Chamberlain..	.40	1 lb.
Maple Sugar and the Sugar-bush, paper .....	.30	1 lb.
Winter Care of Horses and Cattle, paper .....	.30	1 lb.
How to Keep Well.....	1.00	
Our Farming .....	.75	
The Dollar Hen.....	1.00	
What to Do, paper.....	.50	
What to Do, cloth.....	.75	
Celery for Profit.....	.27	
A B C of Carp Culture.....	.25	

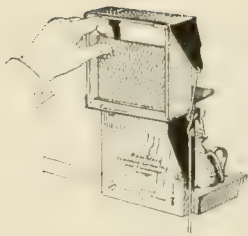
Address All Orders

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

ITALIAN QUEENS

Beginners' outfits and other supplies. Send for list. Address

ALISO APIARY CO.,
Glendale, California.



Comb Honey Producers, Attention!

The time of putting up sections can be cut in half by using the new Rauchfuss Combined Section Press and Foundation Fastener. Guaranteed to give satisfaction or your money back. Price, delivered anywhere in the United States by Parcel Post, \$3.00. Send for illustrated circular today.

THE COLORADO HONEY PRODUCERS ASSOCIATION,
1440 Market Street Denver, Colorado.

Bee-Keepers' Supplies and Fruit Packages

We manufacture the famous Sheboygan hive, which always gives absolute satisfaction. Our perfect sections, made from selected white basswood, are recognized as the best on the market.

Catalog now ready for distribution. Write for copy.

Sheboygan Fruit Box Company
Sheboygan, Wisconsin

You are Invited to
Join the National.

Celebrated Queens Direct From ITALY

**Bees more beautiful, more gentle, more industrious.
The best honey-gatherers.**

PRIZES:

Sixth Swiss Agricultural Exposition, Berne, 1895.

Swiss National Exposition, Geneva, 1896.

Bee-Keeping Exhibition, Liege, Belgium, 1896.

Bee-Keeping Exhibition, Frankfurt O. M., (Germany).

Convention of the German, Austrian and Hungarian Bee-Keepers. August, 1907.

Universal Exposition, St. Louis, Mo., U. S. A., 1904 The HIGHEST AWARD.

Extra Breeding Queens, selected, \$2.00; Fertilized, \$1.50. Lower prices per dozen, or for more Queens. Safe arrival guaranteed. Write.

ANTHONY BIAGGI

Member of the National Bee-Keepers' Association.

PEDEVILLA, NEAR BELLINZONA, ITALIAN SWITZERLAND.

This country, politically, Switzerland Republic, lies geographically in Italy, and possesses the best kind of bees known.

Mention in writing "THE BEE-KEEPERS' REVIEW."

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping: DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

"falcon" Bee Supplies

Shipping Cases, Extractors, Hives,
Etc. Everything for the
Bee-Keeper

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care, and we feel confident that you will be well pleased with them.

Send for our Red Catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

Our Very Best is THE Very Best.

Best Sections

**Best Shipping Cases and
Dealer in Best Bee
Supplies**

We make a specialty of manufacturing **Best** Sections. They are the **FINEST** in the land, none better. When you once buy Lotz Sections you will want no other. Now is the time to buy and have them when the honey flow is on. Prompt shipments. Our bee supply catalogue for the asking.

Aug. Lotz & Co.
Boyd, Wis.

PAGE-KENKEL MFG. CO.

MANUFACTURERS

of the

**"NONE BETTER"
Bee-Keepers'
Supplies**

Perfect sections from young, white, basswood. White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

GUARANTEE:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

Page-Kenkel Mfg. Co.
New London, Wis.

Caucasian Queens and Partridge Pea Honey

NEAR the close of the season
I will have some Caucasian
Queens for sale at \$1.00 each.

My crop of Florida Partridge
Pea Honey is now ready and
for sale, packed in 24-lb. ship-
ping cases, 8 cases to carrier,
\$19.20 per carrier, f.o.b. Florida.

J. J. WILDER
Cordele, Ga.

HONEY COMB AND EXTRACTED

We can furnish both comb and ex-
tracted honey to bee-keepers who have run
out of their own product. All our honey
is strictly first-class. Italian Bees and
Queens in season. Write for prices.

LATSHAW HONEY CO.
Carlisle, Indiana

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined
to swarm, and as for honey gatherers they
have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20.
Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50;
50, \$34; 100, \$65. Tested, one, \$1.50; six, \$8;
12, \$15. Breeders of either strain, \$5. Nu-
clei with untested queen, one-frame, \$2.50; six
one-frame, \$15; two-frame, \$3.50; six two-
frame, \$20.40; nuclei with tested queen, one-
frame, \$3.00; six one-frame, \$17.40; two-frame,
\$4; six two-frame, \$23.40. Our Queens and
Drones are all reared from the best select
queens, which should be so with drones as
well as queens. No disease of any kind in
this country. Safe arrival, satisfaction, and
prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

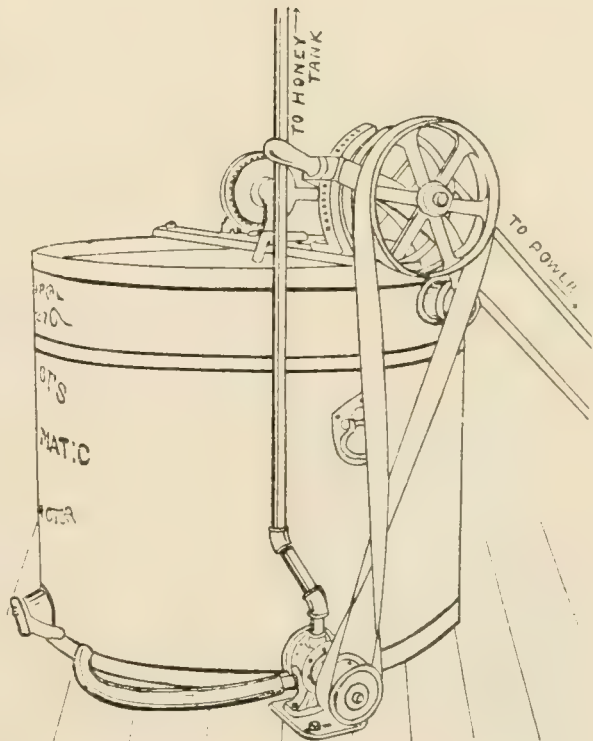
Install a **ROOT AUTOMATIC
EXTRACTOR** and **HONEY PUMP**,
then run them with a **NATIONAL
1½ H. P. ENGINE** and you will then
have an outfit "par excellence" to do
your extracting with.

We quote the engine, four-frame Au-
tomatic Extractor, including honey
pump, belting and everything necessary
pertaining to the outfit, at \$84.00.

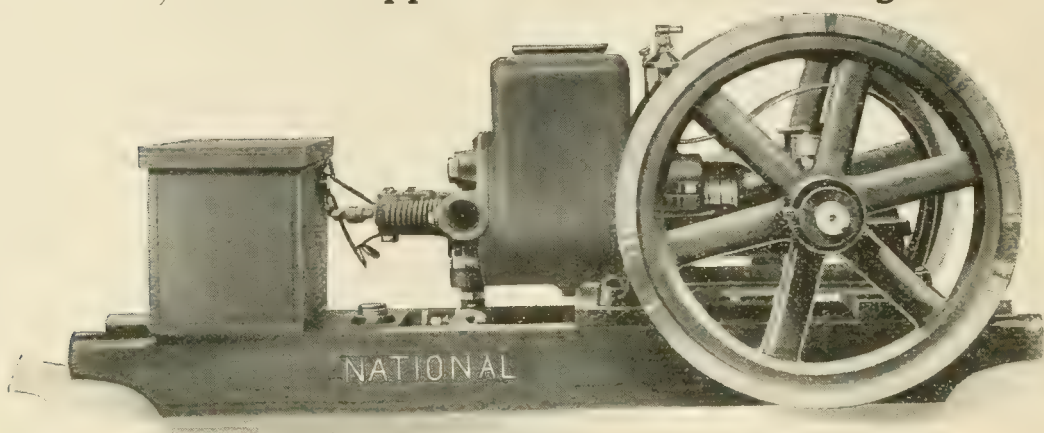
Six-frame extractor outfit as above
at \$92.00. Eight-frame extractor outfit
as above, at \$99.00. Without honey
pump, deduct \$17.50. The engine
shipped from Wisconsin and the bal-
ance of the outfit from Medina, Ohio.
The National will take the money you
hand us and buy the above outfit. Di-
rect from the manufacturer, at our
one small profit system, on the co-
operative plan. Address with remit-
tance

**National Bee-Keepers'
Association**

Northstar, Michigan.



1 1/2 H. P. Hopper-Cooled National Engine



General Description

In design, National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1 1/2; bore, 3 3/4; stroke, 4 1/2; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1 1/4; floor space, 9x36; shipping weight, 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n., Northstar, Michigan.



Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," for their letter heads, envelopes or circulars, can be furnished with them for 50c. each, postpaid. Address

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

We are always in the market for

BEE SWAX

and would be pleased to hear from you whenever you have any to offer. *We pay cash on receipt of Wax.*

FRANK C. CLARK

316 W. Kinzie St.

Chicago, Ill.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1**

THE LANDSCAPE GARDEN CO.,
Newburgh, N. Y.

W. H. Laws

Will be ready to take care of your Queen orders, whether large or small, the coming season. Twenty-five years of careful breeding brings Laws' Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested, after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

THE BEEWARE BRAND MEANS SUCCESS INSURANCE

Send for Annual Catalog which will tell you who is your nearest Distributer. G. B. Lewis Company, Watertown, Wis.

ORGANIZED CO-OPERATION

ADVANCEMENT

The Western Honey Bee

A new Magazine owned and run by the California State Bee-Keepers' Association. Extensive crop reports from the whole country. Hear what the Bee Men say that figure their honey by the car load.

ADVERTISERS

Write for prices. Money spent with us brings business. Issued the first day of each month. \$1 a year.

Business Office, Covena, Cal.

J. D. BIXBY,
Editor.

GET TOP NOTCH PRICES BY USING LEWIS SECTIONS AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributer. G. B. Lewis Company, Watertown, Wis.

"NONE BETTER"**"NONE BETTER"****Western Dealers, Attention!***This message is to you, the large users of Double-Tier Shipping Cases*

We make the best shipping case on the market and specialize on the double-tier for the Western trade. Tell us your needs and let us send you sample of a perfect shipping case and surprise you with our prices.

PAGE-KENKEL MFG. CO.*New London, Wisconsin**Manufacturers "NONE-BETTER" Bee-Keepers' Supplies*

Under date of Feb. 12, Page-Kenkel Mfg. Co. write the REVIEW office in part as follows:

We really have an excellent stock for double-tier shipping cases and sections. We know that we have the best on the market and furthermore our prices are right as you will note from the enclosed jobber's list, the prices that we make to car load buyers. We are right in the heart of the Basswood district and we have our buyer out looking for timber all the time. Naturally we pick up small lots in different places and we certainly get some excellent timber. We know that if we can break in on that western trade no one will get it away from us. Right now is the time that we ought to be making these double-tier cases, and while several of those large western dealers are dicker-ing with us we haven't as yet closed with any.

We guarantee our goods absolutely and agree to refund any money and transportation charges to any customer who is dissatisfied for any reason whatsoever. We really do not know how to make our guarantee any stronger.

"NONE BETTER"**"NONE BETTER"****LEWIS HIVES ARE BUILT LIKE FURNITURE
ARE PERFECT IN ALL RESPECTS**

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

"Griggs Saves You Freight"**TOLEDO****"Griggs Saves You Freight"**

New Goods arriving permits us to fill orders same day as received, and this with direct lines to your door and low freight rates makes **TOLEDO** the best place to order your goods from.

Our New Illustrated Catalogs for 1914 are here and being mailed out. Send in your name for one.

Send us list of goods wanted and receive our special price for quantity orders. **BEESWAX** is in great demand, send it in now. We pay 32c Cash, 34c in Trade. Shoot it in.

S. J. GRIGGS & CO.

25 N. ERIE ST.,

TOLEDO, OHIO.

"Griggs is Always on the Job."**30 DISTRIBUTING
HOUSES FOR LEWIS BEEWARE**

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

BE A HARD BUYER

BUY YOUR COMB FOUNDATION THE CHEAPER WAY

THE CHEAPER WAY—Ship your Beeswax to Gus Dittmer Company and have it made into any grade of DITTMER FOUNDATION you need.

Write for information before you sell your Beeswax.

Beeswax taken in payment for making your wax into DITTMER COMB FOUNDATION.

Ask for the new 1914 catalog.

GUS DITTMER COMPANY

Augusta, Wisconsin

Send for Our Prices on

B E E S W A X

We are paying higher prices than ever before at this Season. WHY? Because of the tremendous demand for

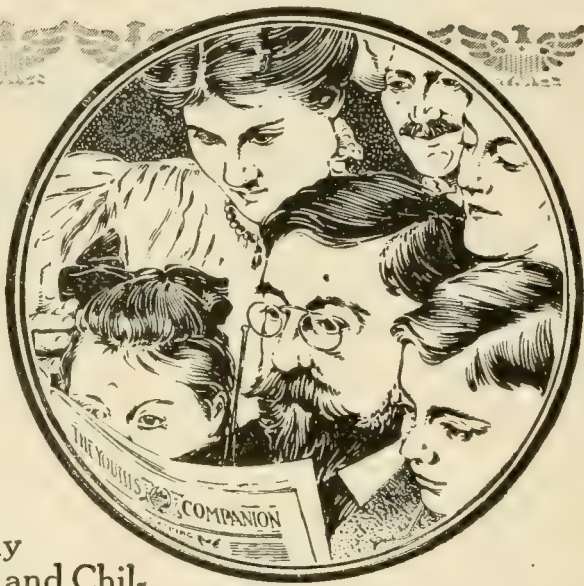
Dadant's Foundation

Write at once. We will quote prices F. O. B. here or F. O. B. your station.

DADANT & SONS

HAMILTON, ILL.

Do you know The Youth's Companion as it is to-day?



Improved and broadened in its scope. Enlarged by the addition of a Special Family Page, Boys' Page, Girls' Page and Chil-

dren's Page. Great serial stories, 250 short stories. A remarkable Editorial Page. Current Events and Science. A wealth of variety and quality, and all of it *the best*.

FREE TO JAN. 1914

Cut this out and send it with \$2.00 for The Companion for 1914, and we will send FREE all the issues for the remaining weeks of 1913 and The Youth's Companion Practical Home Calendar for 1914.

THE YOUTH'S COMPANION, BOSTON, MASS.

Illustrated Announcement for 1914 free on request.

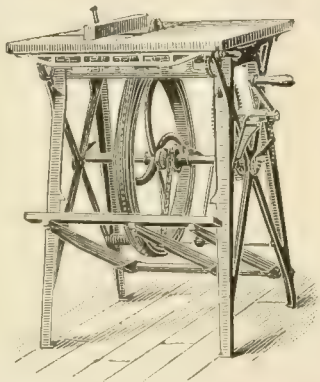
Remember — 52 Times a Year, Not 12

Great Family Combination Offer

We do not know of any Family Weekly that we can more heartily recommend to our readers than The Youth's Companion. It gives us pleasure, therefore, to announce that we have arranged with the publishers to make the following offer.

The Bee-Keepers Review	Regular	\$1	} Both Papers Together For One Year	\$2.50
The Youth's Companion	Price	\$2		

To take advantage of this Club Rate send all Subscriptions to
The Bee-Keepers' Review, Northstar, Mich.



Make Your Own Hives

Bee Keepers will save money by using our Foot Power

SAWS

in making their hives, sections and boxes.
Machine on trial. Send for Catalogue

W. F. & JNO. BARNES CO.

384 Ruby Street,

Rockford, Illinois.

Working Beeswax

In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500 Lbs.	300 Lbs.	100 Lbs.	50 Lbs.	25 Lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.

Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Members kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "National" also, put your mark on the packages so your wax can be recognized and mail the bill of lading also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Mfg. Co., Falconer, N. Y.; Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE NATIONAL BEE-KEEPERS' ASSOCIATION

NORTHSTAR, MICHIGAN.

Pack your wax in double sacks. Use no paper or other packing.

Friction Top Honey Pails and Cans



The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx. Capacity	Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2 lb. Can.....		\$2.25	\$2.15	\$20.00
2½ lb. Can.....		2.75	2.60	24.00
3 lb. Can.....		3.00	2.85	28.00
5 lb. Pail.....	\$5.00	4.75	4.50	42.50
6 lb. Pail.....	5.25	5.00	4.75	45.00
10 lb. Pail.....	7.00	6.50	6.25	60.00
12 lb. Pail.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gollan square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb. Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

Address all orders to

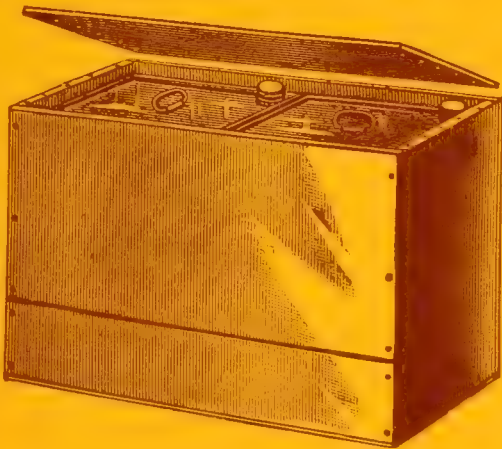
The National Bee - Keepers' Association
Northstar, Michigan

Tin Honey Containers of Quality,

for National Members

Of standard size and guaranteed to be the best to be had at any price.

Specifications of the 60-lb. Can.



Five-gallon Square, Round-Cornered Cans, $9\frac{3}{8}$ " square by $13\frac{7}{8}$ " high, with wire handle, paneled sides and $1\frac{3}{4}$ " Cork-lined Screw Cap.

Above cans crated 50 cans in a crate, **20c** each.

Above cans cased singly with case having $\frac{7}{8}$ " ends and $\frac{3}{8}$ " sides, tops and bottoms, **33c** each.

Above Cans cased in pairs with case having $\frac{7}{8}$ " end and $\frac{3}{8}$ " sides, tops and bottoms. **60c** each

Above Cans cased in pairs as above, in lots of 250 or more cases. **\$57** per 100 cases

Above Cans in car lots of 900 to 1,000 cases. . **\$56** per 100 cases

The above 5-gallon cans with 8" screw cap, add 11c per case of two cans. Add 5c for cans cased singly, if wanted with 8" screw cap.

One gallon square round-cornered flat top syrup cans, with screw caps. The finest can in the world to sell honey direct to the consumer in, and we have had the manufacturers make us some wooden re-shipping cases, the same as those on the regular 60-lb. honey cans, so they will go by freight the same as the larger cans.

Above gallon cans in wooden case, 6 cans in a case. . **60c** per case

10 cans in a case. **95c** per case

We quote them in crates of 50, at **\$7.00** per hundred cans.

Address all orders to
National Bee-Keepers' Association,
 NORTHSTAR, MICHIGAN

Gleanings in Bee Culture

=====FOR 1914=====

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake beekeeper whether he has but one colony, a small suburban apiary, or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY.

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT.

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES.

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance, and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING.—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES.—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies, and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS.

There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho, and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1—WINTERING.—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14, which experiments will be published in this number. We shall also give our own experience summed up as to the feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you can not afford to miss such a wealth of information as the subscription price, \$1.00, will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly

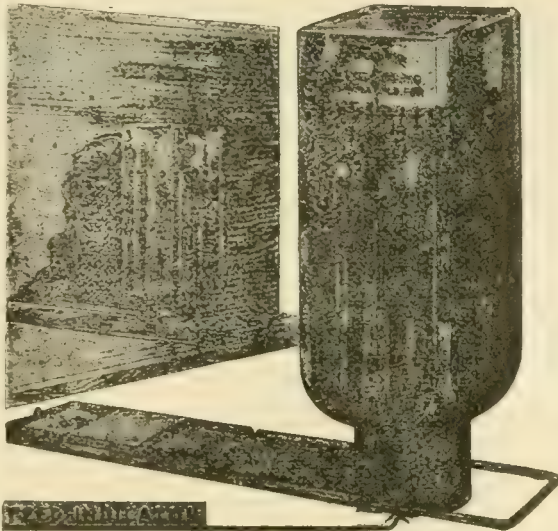


MAY
1914

▼ ▼ ▼
NORTHSTAR,
MICHIGAN

ONE DOLLAR PER YEAR

Thale's Regulative Vacuum Bee Feeder



Thale's Regulative Vacuum Bee Feeder pleases everywhere, not a dissatisfied customer. Let me double your honey crop by stimulative feeding, most practical method known. Send 55c in stamps today for sample feeder.

New Ulm, Tex., Mar. 26, '14.
H. H. Thale, Maywood, Mo.,

Dear Sir:—I rec'd the feeders. I tell you it is the best feeder I have seen so far and the best one that's out. I could have sold mine directly to a bee-keeper, but I gave him your name and address and also the price list of your feeders, he said he sure would have some feeders of your kind.

I am, yours truly,

ALEX A. KANTZ,

Breeder of Choice
Italian Queens.

Poultney, Vt., Mar. 31, 1914.
Harry H. Thale, Maywood, Mo.,

Dear Sir:—Please find P. O. money order for \$10.80 to fill my order for 36 Vacuum feeders with 36 bottles for the feeders and ship to Poultney, Rutland Co., Vt. and oblige. The sample feeder works O. K. If you can forward them at earliest convenience it will be appreciated. Bees are quite short of stores after a long, cold winter in Vt. Lost 4 out of 41 so have 37. But I have an idea with 37 Vacuum Feeders and a barrel of sugar (350 lbs) THEY WILL MAKE GOOD.

Yours Respectfully,
THOS. CANNEY,

Messilla Park, N. Mex.

April 4, 1914

H. H. Thale, Maywood, Mo.,

Dear Sir:—Please find P. O. money order in settlement for 37 feeders I received on 10 days Free Trial. They feed well. They have made the queens of the colonies that I fed start laying.

Yours truly,
JOHN ROBBINS.

Terms, Cash With Order

Sample Feeder, with 2 bottles complete postpaid.....	\$.55
10 Feeders complete with 1 bottle for each feeder.....	3 00
25 Feeders complete with 1 bottle for each feeder.....	7 50
50 Feeders complete with 1 bottle for each feeder....	15 00
Extra bottles with cork valve each.....	10

H. H. THALE, Inventor and Manufacturer
Box R 25, Maywood, Mo.

Eastern Buyers Send Orders to Earl M. Nichols, Lyonsville, Mass.; B. H. Masters, Edison, Ohio and Harry W. Martin, New Holland, Pa. Western Buyers Send Orders to D. B. Hersperger, Ordway, Colorado.

Bees for Business

Italian bees of youth and vigor in combless packages, delivery guaranteed, will be shipped express prepaid during May and June from Southern New Mexico to Colorado common points at \$1.50 a pound, other points at proportionate rates.

1913 Production

Two pounds of bees with queen last year made me one hundred pounds of comb honey—the equal of any of my colonies.

Bright Prospects

There will be honey in the west this year for we have snow in the hills, moisture in the soil and the clovers are so thrifty they are hardly waiting for the season to arrive.

Preparations

You will have the bees if you order packages without queens to strengthen those weak colonies with good queens; and two pound packages with queens, not over one year old, to fill your empty hives.

My Proposition

Full weight, prepaid deliveries will be made during the first three weeks of May; or June deliveries if you prefer.

Two pounds of bees with queen delivered at Colorado Common points for \$3.50.

Two pounds of bees without queen delivered as above for \$3.00.

Other points more or less according to express rates.

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NATIONAL GROUP



The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson.

OFFICIAL ORGAN OF THE
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No. 5

A Retrospect

By **ADRIAN GETAZ, Knoxville, Tenn.**

The year 1913 is come and gone never to return. My best wishes for 1914 to the Review and its editor and readers. Let us look back and see what we can learn from the year just gone and make good use of it.

Prevention of Swarming

On page 222, Miss Mathilda Candler gives a method for the prevention of swarming. Substantially the method is this: Close the entrance with a board having a cone bee escape permitting the bees to come out but not to go back. Nail on the top of the brood nest a piece of wire cloth. The object is to empty the brood nest of bees as much as possible. Put over the wire cloth a hive body with some empty comb and brood and

finally the supers on top of this. Four days later put the whole back to its normal condition. No swarming will occur.

There is no doubt that this method will prevent swarming for that season except in very exceptional conditions. I have tried a similar plan myself. The only difference was that I put the supers immediately on the brood nest or rather on a rim in which an entrance to the supers was provided. The only trouble was that during the few days that the apparatus was on very little work was done in the supers, and losing four or more days' work during the height of the flow was more than I cared to stand so I returned to my old way of caging the queens. A similar method of preventing swarming is describ-

ed by Mr. J. E. Chambers on page 266. But as far as I can see, there is the same objection, that is loss of work in supers during several days.

Size of Entrances

On page 225 Mr. Menhall claims that with small entrances, less swarming will take place and more surplus will be obtained. No doubt this has looked like rank heresy to nearly all the readers of the Review. As a matter of fact, this is merely a question not exactly of locality but of conditions. With single walled hives exposed to the hot summer sun, a large entrance and plenty of ventilation are an absolute necessity, otherwise the interior of the hive would get entirely too hot. But with double-walled hives properly shaded, the case is altogether different, a much smaller entrance is better.

Home Raising of Queens

This was written by me several years ago when Hutchinson was editor of the Review. I had forgotten it entirely and was quite surprised to see it. Page 226. The process briefly described is simply this. Dequeen a colony and give her a comb of eggs from your selected queen to raise the queen cells wanted. At the present time I do no longer cut holes in the comb. I found out that all what is necessary is to spread the combs apart so

as to leave between the comb of eggs and the next one, a space sufficient to accommodate good big queen cells and room for the bees to work around them. A day or two before the queens emerge, the cells are placed in queen cages hung in the hive. As soon as possible after the queens are out, they should be introduced in the colonies where they are to stay. No need of taking the trouble of making nucleus.

Variation in Color of Honey

On page 467 the question is raised whether the honey from a certain source has always the same color or not. It is possible that the season, climate, soil, etc. may have an influence. But it is certain, that the honey of a given origin is rarely pure. Some wild flowers in small quantities, some insect excretions or honey dues alter it more or less and in most cases at least are really the cause of the variation in color and taste.

Short Cuts in Finding Queens

Quite a number of more or less easy (?) ways of finding queens are given on page 357. I will add one more. Move the hive to a new stand not too near. Do that when so many bees as possible are out. Put a new hive on the old stand with a comb of brood to retain the bees. In three days the

(Concluded on page 191)

Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordelia, Ga.

On account of labor problems the Thousand-colony mark is one of the most serious points in extensive bee-keeping. But if the Apiarist is able properly to solve the problems that face him at this stage, and to plan wisely, he will move forward at a much more rapid rate than before; otherwise there will be a halt in his progress. I reached the Thousand-colony mark by the usual method of making increase, viz. by dividing the strongest colonies into two equal parts at the beginning of the first light honey flow in early spring. Then, in the fall, during the

last, light-honey flow, from golden-rod, the heaviest colonies were again divided in the same manner and all well prepared for winter. But the losses were heavier than in previous years, as the weaker colonies could not be looked after as closely as we had been doing, and hence more uniting had to be done.

The home yard set apart for making increase and Queen rearing

The Home yard, consisting of a hundred colonies, more or less varying with the season, had been

run mostly for increase and queen rearing for several previous seasons. But for the future we resolved to run it exclusively for increase, in order to establish more out-yards, and for replenishing any yards that might be decreasing in number. When there was no honey-flow, the home-yard bees were fed, to stimulate brood-rearing. Many queens were reared throughout this season, for there was much requeening to be done at all the yards. From the home-yard we increased the number of colonies in outyards, and two new yards were established that season, making thirteen in number.

In number of colonies we could have gone much farther had it not been for unreliable help.

Our Stock of Bees

Up to this time I have not had much to say about our stock of bees, this subject having been crowded out by other topics. This stock in my first apiaries consisted of the common black or brown bees, but when I had increased to three or four yards I purchased a few Italian queens, and when this stock would not swarm too much, it was much better than the former stock of common bees. But I could not, situated as I was, control that bad feature in them. So I had to abandon the Italian stock, or rather I did not give this particular stock any attention, and it soon disappeared. The other stock, the black or brown, was giving me but little trouble by swarming. But in a few seasons, when I could give my bees most of my attention during the season, I bought some more yellow stock, and soon had my home-yard stocked with it. No sooner had I done so, however, than my bees were making all kinds of trouble about town, by entering grocery and drug stores for sweets. At times the bees were fairly furious, especially at the close of the first honey-flow. During these times my neighbors and their children were often severely stung. Soon the city authorities took up the matter, and upon investigation pronounced my bees a nuisance, and notified me that I could stay, but the bees must go. The people had their eyes on me

and my business, and this surely lowered me in their estimation. I felt no small degree of despondency over the outlook. I had bought land in the city and outlined my business, and I did not see how I could move. I told the town authorities that I could not move the bees away at that time, for the hot weather would make the undertaking almost impossible—that it could not be done without a great loss to me. However, I gave them my promise that I would move the bees as soon as the weather was a little cooler. Just before the time came to move the hives, I learned of the gentle Caucasian bees. I went to the city authorities at once, and they assured me, that if such stock would not do mischief about town, and if I would obtain it and adopt it, the matter would be dropped.

About the same time I received from the Government one Caucasian queen, with notice that two more queens of same stock would soon follow. The first was imported direct to me; the other two, which soon reached me, were sent on from Washington, D. C. It was too late in the season to do much requeening that year, but I did do some, and the next spring I went at it again. I soon had my home-yard stocked with Caucasian queens of my own raising. Sure enough, the trouble with the bees stinging the neighbors was at an end. It has been so ever since that time. I mention this to show what a boon the Caucasian stock has been to me. I still had considerable Italian stock here and there in various out-apiaries. I intended however to requeen as soon as possible, since the black bees were not prolific enough to give more than one crop of honey in a season. I had two honey-flows, one in spring and one in summer. The black stock would gather but little honey during the last flow, while the Italians would gather from both. I still have many colonies of Italian bees in the most remote territory that I cover, but they are not nearly as good an all-purpose as the Caucasian. Therefore I have stocked with the latter as rapidly as I could.

The Qualities of the Caucasian Bees

The best feature of the Caucasians is, that they are so nearly non-swarmling. In fact, their swarming has never given me any great trouble. Occasionally a colony will cast a swarm, especially if storing room becomes scant, but when it does so, only about a double handful of bees go out,

which does not greatly hinder progress in storing. Sometimes whole apiaries will go season after season and not a colony in them show any inclination to swarm. This fact alone has greatly aided me in spreading my out-yards, and in reducing the amount of labor required.

My success I attribute largely to
(Concluded on page 190)

Getting Our Honey Supply with Only two Trips a Year

BY J. A. PEARCE

Author of Pearce Method of Bee Keeping

Are bees destined to give man his greatest and most easily obtained sweet supply? It really looks as if they are. If there is a honey supply coming down to us each year that is greater in value than all our farm crops and cattle, that is allowed to go to waste which might be gathered up so easily.

Bees have spread themselves or have been spread by man, until now there is scarcely a place where man is where bees are not. They have as it were been running parallel with man, sometimes getting a little too near to him, especially if they happened to light on the end of his nose back end first. But always as it were saying to man "Take me and use me," but man has not been intelligent enough to do it. He now seems to be waking up to the great possibilities of the honey bee, so let us canvass the situation a little to see where we are at.

As we have said, Man is on the job, the bees are with man and this enormous honey supply comes down to us each year unsolicited and unlike our mineral wealth when we use it once it is gone forever, for the honey supply is renewed for us each year. Then all that seems to be needed is for man to put this great combination together and use it for his benefit. Heretofore he has not had the proper understanding of the bee nor the proper appliances to work with but now I feel sure that both the knowledge of the bees and the appliances to handle them with have

been so improved, that there should be a great advance on the double quick to gather up this great store of the purest of all sweets and most valuable commercial product for man's benefit. So at this point it seems very fitting that we have emblazoned on the front cover of our national magazine this advice, "KEEP MORE BEES." In the past the farmers and others have had no knowledge of the bees other than to have them increase by natural swarming and in the little hives that they have been kept in they are sure to swarm just at haying time when the farmer was so pestered with other jobs all coming at once that he voted bee-keeping a failure and quit. Now with the modern appliances in which his bees do not swarm naturally and give him this annoyance, he should take this matter up with vigor and secure for himself and family all of this sweet supply which is all about him, and the bees will go out and bring it in for him, so if he desires he need not even go out doors for it. It is along this line that I will now write.

I will suppose then that you have one or more swarms of bees. Instead of letting them swarm naturally as they have been doing or will do if you have them as they are. But about the first of May or just before the fruit blooms wherever you are just put on another hive body filled with good straight foundations or combs and give access to this that is, do not have anything between the two

hives then put on top of these; comb honey cases for 50 to 150 pounds and have or put this outfit in a shelter and where they will be away from all storms and mauraunders and you can go about your business till about the first of November then the bees will have clustered down in this big hive out of your surplus honey and you can lift off your honey without seeing or hearing a bee and you will receive your sweet supply with far less labor than you have received a like valuation of property from any other source on the farm. And this method may be repeated from

year to year just set on your honey cases about the first of May and lift off your honey about the first of November two visits a year this is about as near automatic as we should expect to get things in this world. And it opens great possibilities not only for our farmers, but City dwellers as well where they have attic room. And it should be of still greater value to our men with large numbers in out yards where bees are kept on a large scale. For with a modified plan the apiary may be doubled artificially in one visit at the time of taking
(Continued on page 189)

Field Notes From Michigan

By F. ERIC MILLEN, Inspector of Apiaries for Michigan

Belgian Hares and Guinea Pigs to Keep the Grass Down in the Apiary. Also Something About their Food Value

All appearances point to a good clover yield this season, in this part of the state. On a recent trip I questioned several farmers about the condition of clover and all seemed optimistic. Fall wheat too has come through the winter strong and that usually augurs well for clover.

Wonder whether every bee-keeper has lots of super room to hold a good crop? So many of us usually wait until the flow starts and then after a few days realize that all supers are in use and nectar still in the field. Now is the time to prepare all you need, if not already prepared, why wait until you have lost part of your crop? May be you are satisfied with a fair crop anyway and don't care for a heavier crop.

Don't forget that other things being equal, those colonies which are packed warmest on top will build up more rapidly than those with poorly fitting covers; how are yours? Conserve all the heat you possibly can, until the real warm weather comes.

If you lose any colonies from starvation at this season it will probably be your strongest colonies, these use the stores rapidly in feeding the brood, watch them and feed if necessary.

Wherever one goes, the high cost of living is a vital question. Often too, where the bee inspectors go the high grass and weeds are almost as serious.

I would like to outline a plan whereby the bee-keeper can keep both his grass and cost of living from soaring too high. This plan does not need very hard work and will kill two birds with one stone.

During the fiscal year of 1912-1913, there were imported into the United States 12,112 guinea pigs, while in the previous year there were only 1,471 brought in. These guinea pigs were imported almost solely for laboratory purposes and according to Farmers Bulletin 525 Department of Agriculture, Washington, scientific institutions are now paying as high as \$1 to \$1.50 for their supply of young animals. The price for these the previous year was 75 cents, so the market appears firm.

Besides the guinea pig there is the Belgian Hare rabbit, while the rabbit is not in demand for scientific use to the extent of the guinea pig, yet they too are very useful as I shall try to show.

Both rabbits and guinea pigs will live and do well on green food and if the bee-keeper has his apiary fenced in, he can turn either, or

both, right out on the ground and so keep the grass at a respectable height.

If the apiary is large it might be well to run a wire fence, two feet high, down the middle and then let the rodents use one half at the time.

Rabbits and guinea pigs agree well together and so need not be separated, all that would be necessary would be to have a few small boxes about the yard for use at night, in stormy weather, and while breeding operations are going on.

In turning the rabbits or guinea pigs out for the first time, care must be taken that they do not bloat themselves, to avoid this turn them out after a full meal and feed some green food in the

hutch, or turn them out for a short time daily for a few days until they get used to the grass. They will need little else if the grass is plentiful, but a little hay, grain and dry crusts of bread will be appreciated and some milk during breeding time will help keep them in prime condition. Towards fall, the bee-keeper could reduce his stock, so that he carried over winter, only a sufficient number with which to start operations the next season.

To reduce the cost of living these guinea pigs and rabbits can be marketed, and the house supplied with fresh meat at all times. Some readers may never have had the pleasure of eating a prime young guinea pig but I can assure them that they are good, they can be served in any of the numerous ways in which rabbits are served and are especially fine when baked.

Now brother bee-keeper are you going to let that grass grow this season, or have a trim looking apiary? Of course, you don't have to eat all the guinea pigs and rabbits you raise. You can market them, but if you ever try one you will want more; as the advertisement says, "There's a reason."



Private Office of E. D. Townsend & Sons, while at Remus, Michigan

Now is the time to secure that new subscriber for the REVIEW that you have been thinking of getting. The balance of the year beginning with this number for only 50 cents.

Field Notes From Tennessee

J. M. BUCHANAN, Franklin, Tenn.

Up to the present time, February 5th, this has been the mildest winter in years. There has been no snow and very little rain; in fact there have been few days on which the bees could not fly. Brood rearing has been going on, and the consumption of stores will be heavy. Luckily most of the bees were in good shape at the beginning of winter, owing to the good fall flow. Some, however, will need looking after if the warm weather continues.

Perhaps the best meeting in the history of the Tennessee Beekeepers' Association was held at Nashville on the 30th of January, directly following a two days' session of the State Horticultural & Nurserymen's Association. These three organizations are co-operating to some extent, and the relation between the bee and fruit industries is being brought out as never before. Our Association now has over a hundred members on its roll.

A lively discussion took place in regard to the control of swarming. The point was forcibly brought out that the majority of the bee-keepers made very little effort to prevent swarming and it was shown that with the production of comb honey the bee-keeper has very little control of the matter anyway. It was thought that producing extracted honey, plenty of drawn comb for storage room and good ventilation would go a long way

toward prevention of swarms, the use of young queens was also advocated.

Mr. F. L. Watkins of Nashville told how he cleaned up his apiary of American foul brood, and at the same time produced a good crop of fancy comb honey. He had a hard fight and made some mistakes, but by keeping at it he came out successfully at the end of the season, with nearly 100 pounds of comb honey to the colony, an increase of fifty per cent and the loss of very little equipment. He has about 100 colonies and the work with the bees was in addition to the management of a farm of 200 acres.

Mr. J. M. Davis, the retiring president, gave a history of the bee industry in Tennessee, and also a paper on the "Value of the Bee in Fertilizing Fruit Blossoms." Dr. J. S. Ward, State Apiary Inspector, gave a review of the inspection work for the past season. He reports that there is great improvement in the foul brood situation in the State. A discussion on the "Marketing of Honey" brought out some valuable points. Emphasis was given to the necessity of holding up the price of our products. An election of officers for the ensuing year resulted as follows: T. J. Ayers, of Cedar Hill, President; W. B. Romine, Pulaski, Vice-President; J. M. Buchanan, Franklin, Secretary.

The Secretary's Corner

GEO. W. WILLIAMS, Red Key, Ind.

At the St. Louis convention some of the brothers offered to "chip in" and subscribe liberally to a fund to lift the Review debt. Since that, it has been suggested that any amounts sent be not more than \$5.00, thus giving a larger number the privilege of assisting. Send in the littles, and let's get out of debt.

Your Secretary has given the Publicity subject considerable thought the last few years, and lately has taken some pains to ascertain the attitude of representative producers and manufacturers and to hit upon the proper means of "Boosting" honey. There is a general feeling that the bee-keepers have not been quite as aggressive

and keen as they should have been and a general demand comes in nearly every letter that we "do something" to boost honey.

Honey has been, and is, successfully boosted in spots, and it will be the pleasant privilege of assisting the Affiliated Secretaries to enlarge the spots and inoculate other localities.

Your Secretary has been advised that any one person can do but little in the way of results, and that it possibly would be a waste of valuable time to expect very much. Did you read the little poem in last month's Review? That expresses my feeling to a nicety. We have a young Giant of 20,000 bee-keepers, who only need awakening to make the public just simply crazy to eat our honey if we all get to "Boosting" together. Get your last month's Review and read that little poem, and get into the "swing" and I am sure that this mighty force will "Start in to sing, and tackle the thing that couldn't be done, and do it."

The Secretary's Corner will be a harp with one string and will play much the same tune for a while, at least. The tune will be "Get Busy and Boost Honey." If you do not like that tune, skip this corner, for I will urge in season and out of season that we unite in a nation-wide effort to popularize and increase the consumption of honey.

Have you arranged to make a bee and honey display at your state and county fairs? See your fair managers and have them offer suitable remuneration for the trouble, and then go to it. You can arrange to sell hundreds of pounds of honey at the same time.

Some bright young men and women can earn good salaries giving these demonstrations, and in the winter time can arrange with the big department stores to do the same thing in their stores.

Are you arranging to put placards in your cases for the retailer to hang up? A silent salesman who will sell whole lots of honey. Who will be the first manufacturer to supply these. Can the Review management furnish them?

Careful and Honest Grading

MUST be observed in every case of honey put on the market. Nothing will discredit us quicker than to try and slip a few off grade sections in your cases. It may do at home where your customer can see you and "sass back" about it, but the general market will discredit the whole honey business. A bad section or two in a case will absorb the profit of the rest of the case. My customers pay me more and take all I can produce since I have demonstrated that they can depend on the cases to be uniform. We can never expect to do any big general business until we do this. Do not try to beat the public, It is bigger than we are. Be square.

I have received letters from Mr. Rauchfuss and others, recently in relation to needed work for future publicity, marketing and to prepare the way for bigger production and better prices. These are men of broad experience and are intensely practical. I hope to be able to carry out most of the suggestions in connection with the work I had hoped to get done this season; but lack of funds threatens to be a handicap. I shall push the work as far as I can, and would be only too glad to carry it on at my own expense, but the wife and babies must be considered.

There are several plans of boosting honey that I would like to take up, and will do so as far as means will permit, but to get the full benefit we need considerable more money than we have. I am willing to give my best efforts and assistance with the benefit of what little experience I have in the publicity business, if you will aid in financing the plan.

It has been suggested by several that we raise the money by assessing ourselves a trifle on our capital invested. One cent per colony on our producing colonies. I am doing this myself, and putting the money into postage, and furnishing the paper myself. This would not be much for anyone, and we can profitably use that much from every beekeeper in America.

The rank and file must start this if they want it done, and if this appeals to you, sit right down and help us get it started. When I

receive sufficient returns to warrant it, we will launch such a campaign that will bring the laggards up standing. We have the promise of plenty of financial aid just as soon as the producers show a willing spirit, so that every dollar that comes in now counts ten later on. This is a feature we must not overlook. Some of my friends prophesy that the bee-keepers are not interested enough to respond, at least or not enough of them to make it worth while. This might have been the case at one time, but I can hardly believe that the up-to-date bee-keepers will not co-operate this far.

I had a little hesitancy in approaching this, but I have overcome it and I am going to put it squarely up to you. If you want to "boost" honey, and boost it to where it should be, I am with you to the end. So, when I get 100 re-

turns, we will begin to lay the foundation of a publicity campaign that will ultimately make "Honey" a household word in every home in the land. And remember that the old guard, some of them, are standing back, ready to laugh at me for my enthusiasm, and faith in your enterprise. If you fail me, it will be a disappointment. I do not believe you will fail.

We would like to hear of more local Associations being formed.

Bees are in good shape here in Indiana, wintered well, and uniformly strong. Clover is the finest ever. Looks like a bumper crop.

Would it not be a good plan to have the entire list of inspectors printed in the Review? I have had several letters asking the address of our efficient officer. Write to C. H. Baldwin, State Entomologist, Indianapolis.

EDITORIAL CORNER

The Review a Year Old with This Number under the Present Management

This May number is the twelfth, or anniversary of the Review under the present management. It does not seem credible to think that it has been a whole year since the writer took hold of the Review as managing editor. But the calendar records the fact and we have to abide by it. It has been twelve very pleasant, short months to me and it is the hope that the reader appreciates the Review as well as we at this office enjoyed building it.

We have just received a generous sample of Sourwood honey from our friend, Mr. C. W. Harmon of Asheville, N. C. We do not wonder that his home people are devoted to it, and even partial to it. For the flavor is good, and the body fine, the color light amber, almost clear. To our taste it has a slightly modified after-taste, that is not quite so first pleasant as the first impression. This may be due to "education" or lack of it. For, as in the

case of Basswood, for example, few persons like all honeys at first taste, and of many their first impression is decidedly unpleasant, though they may learn to like such honeys afterwards. It likely would prove true in the case of the Sourwood honey. Mr. Harmon tells me, that his local trade does not tire of that particular honey, and that he can not get enough of it. It is extremely local, I believe, not being produced in a very large area, at least, not a large number of states. We have added this to our collection of United States Honeys. And while speaking of our collection, let me say, that the taste can be cultivated so accurately, as to detect even a slight admixture of any other than a given kind of honey, and that immediately. For example, while calling on Mr. Harold Hornor, of Mt. Holly, N. J., when he was in charge of the root yard and packing house at Jenkintown, Pennsylvania, he handed me a sample of honey, and said, "Is that not Palmetto honey?" I took one sip, and answered at

once "Yes, and a fine article at that." He replied "I thought it was; but was not quite sure." He had simply not been in a position to compare many times, and so could not vouch for a particular kind. With once or twice more tasting you could not have fooled him for an instant. Truly, the little papillae of the tip of the tongue and the forward portions of the mouth, are wonderful, and capable of marvelous cultivation. It is said that expert tea tasters can detect even the least adulteration of brands of tea, even when two or many sorts are put together. And it is also said, that those expert tasters seldom last for many years! Their systems become clogged, and they die early. Glad this is not true of training in the art of correctly labeling and branding honey.

E. G. B.

Moving 385 Colonies of Bees from the North location, 150 miles to our Home Location here at Northstar.

My oldest son, Dell, and a student from S. Dakota, Mr. Wm. Saxer is now, April 11th, at the North yards after our two cars of bees we have there. They have them out of the cellar and are waiting for weather for them to fly before packing and shipping them. In moving bees North, we plan to move late as we can and still get them to their destination in time for the main honey flow. In moving South, as in this case, the opposite rule is practiced, i. e., moving them at the earliest convenient time. No deep thought is required to study out why this practice is best.

Education and Manual Training

Young people who have left the farm to attend school in some distant academy or college on returning show an all too common dislike for manual labor. This dislike has both a right and a wrong foundation. While away at school they wore neat clean clothes and lived in an atmosphere of tidiness and order. And much of this order was brought about by janitors, servants, maids, etc., classes of labor that rank in the minds of most as far below the intellectual plane of the college man or woman.

Intellect is above manual labor, but this does not hinder the man who labors with his hands from thinking logically with his head and making his intelligence save many a physical ache. Here is where our over specialization comes in: we delegate one class of persons to do all the merely physical tasks and another class to do all our thinking for us with the result that the manual laborer remains nothing but a clod, a physical machine; while the brain worker loses the balance necessary to a full rounded existence. The merely intellectual do not reproduce which is evidence enough that the weigher of eternal values does not consider them de-

sirable citizens. Nature values the physical basis as very essential for our best citizens now come from foreign immigrants who are not at the very apex of intellectual heights, but have the homely virtues of honesty, sterling character and physical vigor gathered through the many generations of out-door manual labor of their forbears. The next higher type and the type we are seeing more and more common is that of the fruit grower rising at four o'clock in the morning, loading up his fruit and driving twelve miles to market, but on the way rehearsing a speech he is to deliver before the state horticultural society, or an address on some national reform like the postal savings bank or parcels post. Then when still a fruit grower his neighbors think so well of him that he is sent to the state legislature. Is not this an encouraging sign of the wisdom of the people that they will send one of their own folks to represent them at the state capitol?

A man of brains if he has a sense of the eternal fitness of things will never feel that it is beneath him to take a hand at pure manual tasks. This spirit of pride or snobbishness is shown when a

farm wagon or delivery rig, or thinks it too far beneath him to be seen leading a horse or driving a cow. We will never attain a high standard of real citizenship until we change our ideals in regard to such things.

But it is not amiss to state some of the other side—which is that the desire for neat clean clothes and an attractive person are always in good place. Our clothes have a very vital effect on our character and we can with a little care look neat whether we are pitching manure or digging a ditch. Young folks back from college need not be told that they are too snobbish, when they want to wear well appearing though serviceable clothing at their work. The danger is in the idea that work itself is beneath one. Let us always be farmers but never forget that a farmer can be an artist and a scientist at the same time and the more of a scientist he is the better farming will he do. In fact it takes a man of many scientific attainments to manipulate all the many machines an up-to-date farmer needs. W. F.

We copy from a private letter of Editor Baldwin under date of March 21st, as follows:

"The orange honey crop is just closing in now, and a bumper it bids fair to be, too. I am right in the midst of queen rearing also, and you can imagine I have my hands full. I suppose you are hardly overhauling your bees yet? I have an apiary at Trevoise, Pa., but have not yet heard how the bees wintered there.

"How do yours seem to have wintered? I hope they will come through in fine shape. How many yards have you now? I have only ONE criticism to offer on your editorials and management of the Review; you do not tell us enough about YOURSELF. Of course, in general, that is a fine fault; but in the case of a successful and practical bee-man like yourself, it may be a virtue carried too far."

Dear Mr. Baldwin: We thank you very much for your encouraging words, especially will we take cognizance of your criticism relative to my telling so little of our own

affairs in the past and will try and keep the readers of the Review better posted on our management of the bees during the months to come than in the past. This will be done both by word and picture.

The spring of 1914 has been a very odd one in the South, especially in the Peninsula. In February, and much of January the temperature, while at no time dangerously low, was on the average lower than usual. Bees bred right along, however, owing to many days that they could fly, and the fact, that in the more southern portions, they could obtain forage almost all Fall and early Winter. In general, it is safe to say that bees went into Winter stronger in bees than usual, and came out ditto. While last summer was dry, and so a trying year for bee-men so far as honey was concerned, if they depended on certain forage plants, still it was an excellent year in the East Coast section, in the orange sections, and in the North West, where the Tupelo is produced. The season for storing Orange Honey is just coming to a close here, and a bumper crop it will be, too. The quality was never finer. You may ask "What? Is the quality of orange blossom honey not always alike, in a given locality?" To which we reply "No, because it is an art, to secure Orange Blossom Honey that is ALL Orange Blossom honey." Editor E. R. Root, in Current Gleanings has an excellent article on Orange Honeys in Florida, and makes a very lucid statement and exposition of the Orange honey and its production. Orange Blossom honey is and will always be a rare article, as Mr. H. W. Hawks of Hawkes Park, Florida has well stated. For a crop can be secured on an average only about every other year. Last year was a good year, however, and this year again. That is unusual two good years in succession. But as for flavor and aroma, My! It cannot be surpassed. I have tasted honeys from all over the world, and am ready to stand by Orange Blossom honey to the last. It speaks for itself however, and needs no champion. E. G. B.

On page 132 of the A B C and X Y Z of Bee Culture, latest edition, is a short exposition of various methods of imbedding the wires in foundation, by hand, by pressure, hot irons, etc., and also by electricity. It is to this latter plan that we desire to call attention here. Having a current in our shop for operating our two horse motor, which runs our circular saws, we conceived the idea of utilizing it for foundation work. We had been using the spur wheel imbedded, and while it worked fairly well, if conditions were perfect, if for example, foundation was JUST the right temperature, still the foundation was mashed more or less, and the wire instead of being imbedded, really lay open in a kerf, so to speak, made by the moving wheel. And then, when for any reason, a frame was jarred suddenly, to one side, before it was given to bees, the lower half was sure to slip away from the wire, and no amount of coaxing could make it stay again, unless we poured melted wax into the groove. Such going back and fixing up always takes time, and is costly.

Accordingly we put in four lamps, to act as resistance, and after passing our 110 Volt current through these, we carried it down in two wires, to which were attached wire handles, about four inches long, bent for half an inch at the tip, making a little foot or step, like that of the Presser-foot of a sewing machine; these wire handles we covered with insulating tape, and were ready for business. We turn the switch, allowing current to pass through these handles, as poles, and when they are laid on the wire, above the foundation, for about ten seconds, the wire is seen to sink at once into the wax, a little row of tiny beads of melted wax gleaming along the wire to show that the thing is done. Then the tips are lifted, and touched to the next wire, and so on down. It is rapid and easy. No strain, temperature of wax or room makes no difference. No strain on eye or nerve, or hand. And best of all, the wire is IN the wax, no kerf to let it out. It is in for good. I have taken a frame with

the foundation thus fastened in, and dropped it from a point as high as my arm can reach above my head (I am not a giant!) on the floor, foundation down, wire up, and no damage was done. It looks almost as if the foundation had been made with the wire in it, as the dream of many would make it. And quick, and easy, why, it is fun to put in a hundred sheets of foundation, as a mere pastime before breakfast! We would suggest this arrangement to any who have access to a current. And in these days of interurbans, telephones, and lights, it is becoming more and more widely possible to have a current in your buildings.

E. G. B.

Private Office of E. D. Townsend & Sons While at Remus, Mich.

The friends who we have had so much pleasant correspondence with for the last fourteen years while at Remus will be interested in the picture of our private office shown on another page of this number. This same furniture is now being used, in connection with what National furniture we have at the Review office at the present time. In a later number we hope to get time to show you a picture of the Review office as it is today. In this kindly do not picture in your mind anything elaborate.

The Review to Contain More Reading Matter in the Future

The reader, ere this, has noticed that the yellow cover of the Review is no more. This, rather expensive luxury, that the late Mr. Hutchinson thought so much of, on account of his artistic turn of mind, we find is not appreciated (according to it's cost) by the readers in general, and the present management asked the delegates at St. Louis to be allowed to discontinue it and they unanimously consented to the change. The point that will interest the reader most is the fact by making this change we are able to give you about four extra pages of solid reading matter each month more than the Review EVER contained before. This is the equivalent of two extra articles each month, or twenty-four two

page articles extra each year. It will be noticed that we had the good of the subscriber in mind when we made this change. We hope you will like the Review under its present form.

Bees Wintered Better Than Usual

Reports go to show that as a general rule bees have wintered better than usual in the Northern states. Our three yards that we wintered outside in dog houses containing four swarms seem to have wintered rather better than the average. Good winter stores is the main secret of wintering outside, in locations so far north that bees do not have a chance to fly as often as each six weeks. Our bees here in Gratiot county have that kind of stores, for we get nothing to speak of but Clover honey in this location. Speaking of quality of winter stores, we have a good example of the difference in wintering between good and poor stores in the ninety-two swarms we wintered in the cellar under my son's house. Sixty of the swarms were bought in a clover location where no Fall flow of honey is ever secured, a location similar to the one here at home mentioned above, while thirty-two were secured in a location where a fall flow of buckwheat and aster was gathered. One can point out nearly every swarm from the aster location from the entrance indications, for they are spotted more or less, while the white clover colonies are almost perfectly clean of spots. Although only two with bad stores have died outright, more are weak and we will expect smaller crops of surplus from these that wintered on aster honey. But two of our yards this season will be in reach of aster honey. This will be extracted at the end of the flow and sugar syrup fed for winter stores.

The writer has been almost deluged with inquiries from bee-men in the North, and Northwest who desire to learn more about Florida. Florida is in the lime light now, and is there to stay, I believe. For there is but ONE PENINSULA. That is the unique feature. No one

can make another Florida. Dame Nature did it once, and then said "Enough—One Florida is enough for people to squabble over." And closed the book. And people are really almost beginning to "squabble" over Florida. The Tourist traffic this year has been heavier than ever before, and interest in all that goes on here is at fever pitch. One letter from a correspondent, who wrote asking for information, said "I am sick and tired of this cold, and changeable weather. I surely wish to get down to see fair Florida." One thing Florida has, that none can gainsay; her glorious sunshine and blue skies. Her lands, save in certain favored spots, may be sand, that requires heavy applications of fertilizer to produce results; her freight rates may be high; the living may be above the average North in cost, high as it is everywhere; but show me another State in our glorious union, where, within 24 hours of New York, you can be beside some glassy lake, inland, or on the coast, and go fishing or even bathing in practically every month in the year, where nearness to trade winds makes a delightful breeze nearly every day of warm weather, where miles of orange groves break the expanse of pine or palmetto, where the mocking bird trills his notes from February to May, and where the robin, thrush, and lark come down from the frozen North to keep you company! When inquiring should write me, asking what is Florida's greatest asset, I reply "Her climate." And that is the truth. Some things else you do get, many in fact; but that is the one feature in which she stands unequalled and unchallenged.

E. G. B.

The January and February numbers of the Review for 1914 are exhausted. Will a few of the friends who do not preserve their back numbers mail their January and February numbers to this office for which we will be very thankful. Anticipating a supply from our liberal members, those who are short these numbers kindly write this office and copies will be mailed free, as fast as we receive them.

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We expect to publish the Secretary's report of the St. Louis convention in the June REVIEW. The first of the list of papers read at that time will be found on another page of this number.

Kentucky as a Bee-Keeping State

Presented Before The Kentucky State Bee-Keepers' Association

By H. F. HILLENMYER, Lexington, Ky.

Lexington, Ky., January 9, 1914
Also at the National Convention at
St. Louis, Feb. 18th, 1914.

In being asked to meet with you today, it was not the expectation that I should contribute anything to the successful practice of your art, but only to be reminiscent about its evolution, and forecast

the chances of the future. I thus am only a voice of the past, from the echo of which you may appreciate that the world moves and that you have moved with it, only a "class prophet" so to say, that knowing the past, looks dimly but hopefully on the future.

Both my parents were familiar

with the management of bees in one of the best honey regions of Europe and brought the knowledge they there acquired to their Kentucky home, established three-fourth of a century ago. No rural branch of the family from that day to this, but has been a keeper of bees, never for pecuniary gain, but because of that fascination, engendered by contact with a creature, the most wonderful and inspiring, given from the creative hand.

At this early day there was little accurate knowledge about all these questions, later solved by the introduction of modern frames and distinctive kinds of bees. The Langstroth hive, the Italian bee, were introduced about the middle or the later 60's. Prior to that time all colonies were kept in hives having a cubic content of from 2000 to 2500 inches, with



Dr. Burton N. Gates, Amherst, Mass., re-elected president of National at St. Louis February 1914

two cross bars to support the combs. In the top of the hive were five holes, in a square, one being in the center. Above these was applied a cap with capacity of 15 to 20 pounds of surplus. The hives were generally made of undressed lumber, there being a prejudice against paint, white-wash and planed surfaces. The "old school" of that day maintained that a "gum," a section of hollow log, was superior to a box, in that it was cooler in summer and warmer in winter. These I recall with distinctness.

The most profitable colonies were those kept in an attic in a large outer box with capacity of about half a cubic yard, the smaller box being in a corner thereof. There



Frank C. Pollett, Atlantic, Iowa, elected vice president of the National at St. Louis, February 1914

through the wall of the building, with an alighting board just beneath. The amount of honey stored was incredible. When winter came the bees retired to the inner box and their treasure was taken at leisure or just as needed. There are in mind two colonies so managed, that for some twenty years, or more annually yielded fine stores, and only swarmed two or three times in all those years. The statement is made with deliberation that a greater weight of better matured honey can be secured, year after year, in this way than in any other whatever, and with less care.

The number of colonies kept at that time exceeded those now found in the same territory, and their yield was very satisfactory.

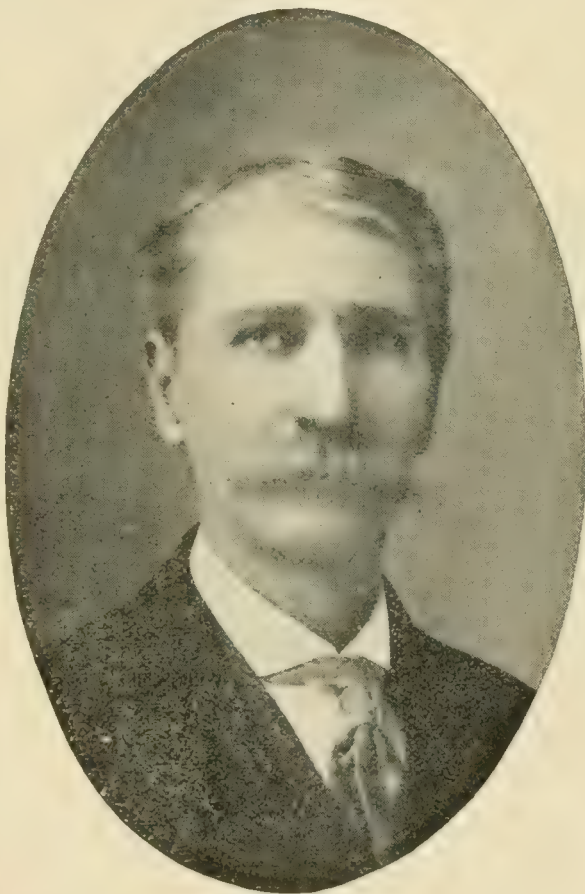
Everyone kept a few colonies and what a clanging of bells and beating of pans during swarming time. The charivari to the "two made one" of the present day is hardly a circumstance. But honey was hardly an article of commerce, but one of home production and consumption rather, and of friendly barter, gift or exchange. Shortly after the Civil war, came the Langstroth hive, the wooden frame, the beautiful Italian, and

the abundant and fascinating literature of an expanding but meagerly developed art. It became the day of commercialism, rather than love for investigation of the mysterious and occult ways of a wonderful insect. Colonies were greatly multiplied, the field was over stocked,

the unripened product, thin and watery was prone to sour, and an industry that flashed up like a meteor fizzled out in ignominy. Then came the day of the specialist, with wider knowledge, with closer care, with greater skill, with more love and in consequence greater profit and success. But with all these the production of honey sixty years ago was much greater than now.

Other factors have entered into this problem making the production of honey now more uncertain than in that long ago. I recall when buckwheat was raised on almost every farm and what a gathering

therefrom and how strong and well provided the colonies entered the winter. In that day the clover sickness of the soil was a thing unknown and it filled the earth in its plentitude. The forests were yet unculled and in their glory, keeping the asper winds of early spring from sweeping the surface of the earth with its raw touch and mitigating by their retained moisture the avidity of the air. The loss of bees in the early spring is a calamity not less than that dryness of air that cuts off the golden flow in the bowl of its birth. I am not quite sure but that



Geo. W. Williams, Redkey, Ind.
elected secretary-treasurer of the
National at St. Louis February 1914

the misceogeny of the kinds deteriorated the pugnaceous and virile stock that could so well care for itself without the protecting hand of man. I am not quite sure that the same law of physical proneness to disease and inability to combat it, in high development

does not equally apply to the bee. But these are academic questions hardly within my province to discuss.

For the keeping of bees, the Ohio Valley is neither the best nor the worst. It is not so good as it was, in that buckwheat has been definitely abandoned, and that was the only plant that yielded a large flow of inferior honey, but of pre-eminent value as a winter store. You need not solace yourselves with the hope that any honey yielding plant will ever be generally grown in the Ohio Valley except it has value other than for your purpose. The climate of this internal basin may be adverse, in that white clover, your only dependable source of commercial honey, will not secrete nectar when the weather is so hot and dry as it frequently is. The plant itself is sensitive to autumnal heat and drouth, and your prospect for next year is sadly shadowed through the conditions that prevailed last fall. Alsike which was so thoroughly tried out forty years ago is valuable under the same conditions. The sowing of 1913 is dead and farmers are abandoning it now for the same reasons that they did then. Scarlet clover is a grand intermediate between the blooming of the fruit trees, the locust and the white clover, but fall humidity is the one thing needed to success and this we rarely have at that season. Alfalfa has been the illusive dream of Kentucky farmers for these many years, and success with it seems so near and is yet so far. In the arid but irrigated West, it is the fixed star of the apiarian's hope but here in Kentucky aside from the difficulty of obtaining a stand it is my observation that it secretes nectar only under the conditions applying to white clover, and we cannot irrigate. Mellilotus, held in contempt by every self respecting cow may infest the waysides to your advantage but hardly attract the farmer where better clovers thrive.

I am by no means a pessimist, but a lover of honey and bees. The vibration of their tireless wings makes sweeter music to my ear than that of any key or chord. As fruit growers they have been friends and allies ever true and trusted. In

their tireless search for the nectar or pollen of every flower, they have kept virile and strong the pulses and arteries of the great insentient domain of life, by infusing into every seed, pregnant with the germ of continued life, the possibilities of a higher development. The ruddier glow of the apple, the warmer blush of the peach, the deeper sweet within the heart of the em-purpled cluster, and the continuing uniformity of all these types of life that bloom, are largely due to the work of these tireless evolutionists.

No earthly king has ever ruled with equal wisdom, nor over subjects so devoted to the common good. In defense of home and country men offer the rich red currents of their heart. Attack the home of the bee or offer violence and every sturdy denizen therein at once enters the conflict of defense not only ready but with a purpose of yielding life therefor. To voluntarily lay down life for another is in man the supreme measure of devotion, but to yield it for the common good is a higher and nobler impulse and attribute. The bee is an architect of supreme skill. The structure of a honey comb in strength, in economy of space and material is a marvel of mechanical construction just as is its filling in contravention of the law that liquids at once seek their level. The order, system, harmony, and unity of purpose in government within the hive are wonderful, and well may we turn to the bee to learn wisdom. To man, proud and imperious with his wonderful intellect but with full knowledge of his limitation was it once said: "Eat, but of this bread and you shall not die." He doubted or disbelieved. When a proud queen by some vicissitude is swept aside, leaving filled no regal cell but only the capability of drone and worker, within the spirit of that servile eunuch born to toil or serve, lives there the abiding faith that through a special bread will develop the power to live, notwithstanding the seeming certainty of doom and extermination, and of such is the faith that moves mountains.

In conclusion, let me wish you well in the following of your noble art. May your hope be, not so much

to reap the gold of the mine as that richer wealth which association with this noble creature brings to the heart. Your efforts, whether crowned with material gain or not are sure of a perfect reward in your contemplation and association with one of the most marvelous creatures found within the entire domain of life.

Iowa Summer Meetings

The Iowa Bee Keepers' association has arranged for a series of summer meetings the first of which will be held on May 19 and the last on August 20. Most of these meetings will be in the nature of picnics. Everybody will bring a basket of lunch, the wife and babies and enjoy the day.

The first field day will be held near McGregor or North McGregor on May 19. It is desired that all honey producers of Iowa and Wisconsin meet together on this occasion and McGregor has been chosen as a convenient point. N. E. France of Wisconsin will be the principal speaker and a large attendance is expected. Bee keepers from considerable distances have already signified their intention to be present.

At Colo June 10, the Ladies' Aid society will serve dinner at a reasonable price and the field meet will be held at the Hall home apiary which is within easy reach of the station. Mr. Hall's big honey house will be used for a convention hall in case of rain. Prof. C. E. Bartholomew of Ames will give the principal address. So much interest has been manifested in the Hall methods of honey production that a good attendance is assured.

At Forest City June 17 the meeting will be held on the grounds of Hon. Eugene Secor, former president of the National and one of the best known bee-keepers of the middle west, who has kept bees continuously in his present location for forty years. It is hoped that a liberal representation of Minnesota bee-keepers will be present here as it is but a few miles from the state line.

At Des Moines July 15 a big day is planned at the Dustman apiary which is convenient to the car line. The committee is planning a series of interesting demonstrations. The

central location and splendid railroad facilities from all directions makes Des Moines very easy of access.

At Mt. Pleasant July 28 is to be held the fifth field meet of the season. The committee is already making plans for the program with C. P. Dadant of Illinois as one of the speakers. Bee-keepers from Western Illinois, Northeast Missouri will find Mt. Pleasant easy to reach and should plan to come.

On August 12 at Clarinda the friends from Nebraska and Missouri will find a point easy of access and the Strong apiary will be the place of meeting. Mr. Strong, the well known queen breeder has been keeping bees for almost half a century will demonstrate his methods of queen rearing. The program will be announced later.

For several years the bee-keepers in the vicinity of Sioux City have held a tri-state meeting the date of which this year is set for August 20. Friends from South Dakota and Nebraska meet with Iowa bee-keepers for an annual picnic at Riverside and the committee in charge always plan an interesting time.

A meeting will also be held at the Coverdale apiary at Delmar the date of which will be announced later. Coverdale has become famous as a grower of sweet clover as well as an extensive honey producer. In planning these meetings the association has tried to place them so that at least one would be within reach of every Iowa bee-keeper and we hope note will be made of the times and places and that friends from other states will attend in goodly numbers.

Bee-Keepers' Review:—Enclosed please find three dollars, one dollar to apply as subscription to Review, two dollars to apply on purchase fund of Review.

Bees wintered fine out of doors but consumed a lot of stores and all had thirty pounds and over last fall. Neglected to protect entrances with wire screen and mice had a feast. Never again without wire!

Very truly,

A. MARTINI,

Loramoor, Lake Geneva, Wis.

Some Seasonable Suggestions from a State Inspector of Apiaries

By FRANK ERIC MILLEN B. Sc.A. East Lansing, Michigan

There is probably more foul-brood spread in the spring than all through the rest of the year.

In most instances bee-keepers themselves are to blame for this state of affairs and the remedy is in their own hands.

Few bee-keepers, if questioned would admit that they wanted foul-brood, yet once it occurs they do not take effective steps to rid themselves of it.

Why not make a little effort this spring to prevent foul-brood, either American or European, making any further inroads on the profits of your apiary?

Have you a bulletin on the diseases of bees, so that you are able to recognize any brood that is not healthy? You can procure one from the department of agriculture, Washington, D. C. or from your state agricultural college. Every bee-keeper should not only have one of these bulletins, but should be able to diagnose unhealthy conditions in the apiary. In this way you may prevent the disease from becoming epidemic.

It is not fair to your neighbors to keep bees unless you are willing to do all in your power to keep those bees free from disease. If they are worth keeping at all they are worth keeping well.

How many books, relating to bee culture, are there in your library, and how many bee journals are you subscribing to? One article in one journal may, and in nearly every case there are many such articles, pay the subscription many times. Get some of the other man's ideas, it will be a good investment.

In my inspection work I have often seen similar conditions in different yards where foul-brood has done serious damage.

One thing noticeable is that the hives are so close together that it is next to impossible to keep the bees from mixing very considerably and when these come from a diseased colony they are very liable

to spread the infection. Robbing will also be more apt to break out and once commenced may spread foul-brood throughout the yard.

Then I also find a number of hives containing combs but no bees. The bees died during the winter or early spring and the bee-keeper was TOO BUSY? or too negligent to remove those hives to a safe place; consequently other bees had robbed out all the honey and seriously spread any disease that may have been present.

It is cases like these that nullify the work of the bee inspector and while such apiarists exist, the inspector may work day and night, but foul-brood will still prevail and be a source of trouble to the more careful bee-keeper.

If every apiarist would make a special effort this season to see that he, at least, would not be the cause of spreading more disease among the bees, the outlook would be more promising. If you will be observant and avoid the dangers I have referred to you will be helping us and yourself as well.

Remove all those dead colonies NOW and reduce the entrances of the weak ones so that they can guard their homes better. Then give each colony a little more space, don't attempt to place a dozen colonies where there is only room for three or four. You will find your bees nicer to work with and there is less risk of disease when you keep your colonies some distance apart.

There is no disgrace in finding foul-brood in your yard, but the same cannot be said if you make no attempt to rid yourself of it.

All Michigan bee-keepers should remember where to write for information concerning bee diseases. We are now preparing our work for the summer and if you suspect foul-brood in your locality write to the State Inspector of Apiaries, Department of Entomology, East Lansing, Mich.

The Review Debt Subscription List

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we must have many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$65 25
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William Marshall, Carpentersville, Ill.....	1 00
F. R. Jordan, Chadbourn, N. C.....	1 50
Joseph S. Scott, Mt. Pleasant, Ala.....	1 00
Ivan Rawson, Richmond, Mass.....	25
George Sickels, Secorro, N. M.....	1 00
Wm. L. Drew, 13 East Ave., Ithaca, N. Y.....	1 00
L. H. Hight, Cornell, Ill.....	1 00
A. Mauctel, M. D., Bay City, Mich.....	1 00
A. Martin, Loramoor, Lake Geneva, Wis.....	2 00

Subscriptions to the Review debt are not coming as fast as we anticipated; still, we have at this writing \$91.75, the last month's contribution being the largest yet, which is very encouraging. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the June REVIEW. We feel proud of the above list. It is the largest one yet and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we should like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The members's name and address is under the kind of honey each has for sale. Nearly all have extracted

honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write his office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.
W. T. Sherman, Elkhorn, Wis.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint—Cotton Blend

Wilmon Newel College Station, Tex.

Raspberry

F. D. Stephens, Box 383, West Branch, Mich.

Alfalfa

A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander, Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.

Amber

G. Frank Pease, Marshall, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Guirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.

Latshaw Honey Co., Carlisle, Ind.

O. P. Hendrix, West Point, Miss.

Mesquite

Arizona Honey Exchange, Tampe, Arizona.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittinger, Rt. 11, Franks-ville, Wis.

Clover and Basswood Blend

Elias Fox, Union Center, Wis.
Dr. C. G. Luft, Fremont, Ohio.
Frank Kittinger, Caledonia, Wis.

White Clover

E. F. Smith, Chadwick, Ill.
B. F. Schmidt, North Buena Vista, Iowa.

N. O. Walker, Franklin, Tenn.

E. D. Lerch, Morrisonville, Dane Co. Wis., No. 19.

Pyron S. Hastings, Rt. 5, Brook-ville, Ind.

S. C. Boyle, Bode, Iowa.

L. A. Doney, Dixon, Iowa.

Orville Safford, Fort Edwards, N. Y.

C. J. Oldenberg, Belle Plains, Minn.

J. H. Allemier, Delphos, Ohio.

Snyder Bros., Center Point, Iowa.

Dr. C. G. Luft & Son, Fremont, O.

C. J. Barber, Smithland, Iowa.

C. L. Pinney, La Mars, Iowa

A. S. Crotzer, Lena, Ill.

W. H. Pearson, Mitchellville, Iowa.

John S. Coe, Boyce, Va.

M. H. Lind, Baders, Ill.

Frank Kittinger, Caledonia, Wis.

W. E. Forbes, Plainwell, Mich.

Wm. E. Prisk, Mineral Point, Wis.

Quirin-The-Queen-Breeder, Belle-
vue, O.

Niels A. Nelson, Dike, Iowa

Geo. E. Capwell, Cottonwood Falls,
Kansas.

A. H. Fralick, Homer, Minn.

Joseph Kurth, Mineral Point, Wis.

Charles Lotz, Monroe, Iowa.

Bell E. Berryman, 2308 20th Ave.,
Central City, Nebr.

Geo. W. Woodhull, Kinde, Mich.

Mangrove, White as Clover

A. F. Brown, Hawks Park, Fla.

Partridge Pea

J. J. Wilder, Cordale, Ga.

Buckwheat

Jas. McNeill, Hudson, N. Y.

E. A. Duax, Chippewa Falls, Wis.

Wilmer Clarke, Eastville, N. Y.

We are printing 500 extra copies of the REVIEW for the last eight months of this year beginning with the May number, anticipating a heavy demand for those numbers on account of publishing the many valuable papers read at the National Convention at St. Louis last February, during this period. Get on the list before the numbers are exhausted.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Five or six tons of amber and buckwheat extracted honey. HENRY J. ZINN, 1135 Wyo Ave., Forty Fort, Pa.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WE HAVE a customer who wants a car of Alfalfa honey; mostly extracted. Members having this amount for sale will do well by writing this office, stating quality and lowest price they will sell for.

FOR SALE—White Clover Honey, none better. In 10 lb. pails, six in a case, at \$6.50 per case; 5 lb. pails, 12 in a case at \$7.00 per case; ½ lb. glass jars, 24 in a case, at \$2.80 per case. Sample, 4c. HENRY STEWART, Prophetstown, Ill.

Cash for Members' Beeswax

Members having beeswax that they want to turn into cash, we can advise you where you can get 36c delivered for it. Dealers: Beeswax is very scarce, and if you are in need of wax, and can spring this price any, kindly advise this office, as we can likely turn some wax your way.

COMB HONEY wanted at all times. Also Potatoes, Onions Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind. tf

FOR SALE—Extra fine extracted clover honey. Have had no better in 25 years. Tiered up and well ripened before extracted. It is in new 60-lb. (net) square cans, two in a box. Price on request. Dr. C. G. ULFT & SON, Fremont, Ohio.

BEEES AND QUEENS

FOR SALE—100 Colonies Bees. Address W. H. STANLEY, Dixon, Ill.

WANTED—30 to 50 free from disease colonies of bees. Address J. A. Pearce, Route No. 1, Grand Rapids, Mich.

WANTED—100 colonies of bees in lots of 25 or more. J. VAN WYNGARDEN, 10829 Wabash ave., Chicago, Ill.

WANTED—To buy bees. Give full particulars and prices. WM. DAVENPORT, 2201 Pioneer Road, Evanston, Ill.

BEEES by the pound without comb, \$1.25; ½ lb., 75c; queen, Italian \$1.00. ROSEDALE APIARIES, Big Bend, La.

FOR SALE—One to 100 colonies bees in 10-frame hives. Any quantity to suit the purchaser. Address L. E. Evans, Onsted, Mich.

FOR SALE—Untested Italian queens, Howe stock. Guaranteed pure. Selected mated, ready about June 15th. Send for circular. Price one 85c six for \$4.50, \$8.00 per dozen. No foulbrood. D. G. Little, Hartley, Iowa.

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c E. E. MOTT, Glenwood, Mich.

SAVE THAT QUEENLESS COLONY! We can furnish by return mail, vigorous tested Queens for \$1 each. No disease. Satisfaction guaranteed. Untested Queens, ready April 15, \$9 per dozen; \$1 for single Queen. Three-band Italians only. J. W. K. SHAW & CO., Loreauville, La.

TRY MURRY'S strain of 3-banded Italians. No better honey gatherers anywhere. Queens reared by latest scientific methods. Eighteen years' experience in queen-breeding. Prices: Tested, \$1.00 each; Untested, 75 cents each. Reduced prices after May 10th. Also bees by the pound after that date. H. D. MURRY, Queen-breeder, Mathis, Texas.

FOR SALE—A limited number of very carefully reared Italian queens. Original stock from Moore and Doolittle. Let me book your order now, then mail your queens during spring and summer. A limited number of tested and breeding queens for spring delivery at the following prices: Tested at \$2; selected tested, at \$2.50 each; breeders, the very finest, at \$5 each. Untested, June and later, at 90c each, or \$9 per dozen. Orders filled in rotation as hooked. Get on the list early to be sure of your supply of queens. R. A. SHULTZ, Rt. 3, Cosby, Tenn.

THE BEEWARE BRAND MEANS SUCCESS

INSURANCE

Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

FOR SALE—15 colonies Italian bees in Danz hives. Combs drawn on full sheet foundation. Write LEON MORRIS, Elizabethtown, Ind.

GOLDEN ITALIAN QUEENS about June 1st. Tested \$1. Untested 75 cents each; dozen \$7.50. Satisfaction guaranteed. J. I. DANIELSON, Fairfield, Iowa, Route No. 7.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on newsletter for May delivery. We have Moore's strain of Leather colored Italians. OGDEN BEE AND HONEY CO., Ogden, Utah.

FOR SALE—Three-banded and Golden Italian queens and bees that are gentle, prolific and the best of honey getters. Also bees by the pound and half pound, and nuclei. Circular on request. L. & H. APIARIES, Clarkston, Mich.

PURE ITALIAN QUEENS, June to October, mothers chosen from 150 colonies whose bees are most noted for purity, gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute. more 50 cents each. J. H. HAUGHEY, Berrien Springs Mich.

QUEENS bred from Doolittle's best stock, untested 60c each, \$6.60 per doz., \$50 per 100. Same stock of one-year-old queens removed from our colonies to prevent swarming, 50c each, \$5.40 per doz., \$40 per 100. Delivery guaranteed. Nuclei, 2-frame, \$1.50; 3-frame, \$2.00. Add price of above queens wanted. We have a rare bargain of an apiary of several hundred colonies of bees for sale on easy terms. Particulars on request. SPENCER APIARIES CO., Nordhoff, Cal.

MISCELLANEOUS

FOR SALE—Motor Cycle, Telephones. Address E. PRESSLER, 1726 Armitage Ave., Chicago, Ill.

HONEY LABELS—Catalogue and prices free for the asking. PEARL CO., Clintonville, Ct.

FOR SALE—Bee-Keepers' supplies, honey and bees. Write for price circular. A. E. BURDICK, Sunnyside, Wash.

WANTED—By a lady with college training as a bee-keeper, but without practical experience, a position with some practical bee-keeper during this season as a student. For further particulars address Lady Bee-keeper, Care The Bee-Keepers' Review, Northstar, Mich.

YOUR NAME AND ADDRESS on 100 envelopes 30c; on 100 sheets writing paper 30c. All postpaid. PEARL CO., Clintonville, Conn.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR EXCHANGE FOR QUEENS, or sell, 50 Alexander feeders, best make.. Address F. D. Stephens, Box 383, West Branch, Mich.

FOR SALE—100 Heddon hives and fixtures to run a 100 colony apiary. Bargain to clear out. Address MRS. R. L. GRAY, Lapeer Mich., R. F. D. 4, Tel. 246—R 11.

FOR SALE—Flemish Giants Rabbits, \$3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats, 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

FOR SALE—Eight Little Wonder Bingham smokers at a closing out price of only 40c each, or two for 75c. Add postage for 2 pounds to go by mail. Address Mrs. W. Z. HUTCHINSON, Flint, Mich.

TO EXCHANGE FOR EXTRACTED HONEY—One Wheel-hoe with Seeder; one Spray Pump; one Cider Mill. All high-grade articles, used very little. Write for particulars. JOHN E. MILLER 44 Broad St., New York City.

WANTED—Reliable man of good habits to work with bees. State wages, age and experience first letter. The Rocky Mountain Bee Co., Forsyth, Montana.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson Mich.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE—Two dozen mailing cases, bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Mich'gan.

You are invited to become a National member.

RULES FOR AUTHORS

Dr. Edward Everett Hale, author of "The Man Without a Country," and other notable books, gives a few rules which are of interest to the author and the journalist. Dr. Hale's success in the literary world makes these rules, gleaned from the field of experience, especially valuable to young writers:

1. Know what you want to say.
2. Say it.
3. Use your own language.
4. Leave out all fine phrases.
5. A short word is better than a long one.

The organization to be worthy of the name must have effectiveness in all its members. Every man, woman and child must perform their duties to the best of his or her ability. It's the united effort that counts. The harmonious pull, the do it all together just as well as it can be done. Success comes to those that are willing to do just a little more than their part.

—Good Advertising.

You are invited to become a National Member.

April 1st, 1914, Statement of Ownership, Management, Circulation, etc., of the Bee-Keepers' Review published monthly at Northstar, Michigan required by the Act of August 24, 1912.

Managing Editor—E. D. Townsend, Northstar, Mich.

Business Manager—E. D. Townsend, Northstar, Mich.

Publisher—The National Bee-Keepers' Association, Northstar, Mich.

Owners—The National Bee-Keepers' Association, Northstar, Mich.

Known bondholders, mortgagees, or other securities: The National Bee-Keepers' Association purchased the Bee-Keepers' Review on a contract from E. B. Tyrrell, Detroit, who now holds said contract.

Signed,

E. D. TOWNSEND,

Sworn to and subscribed before me this 1st day of April 1914.

F. L. COSS, Notary Public.

My commission expires March 17, 1918.

The Heart's Cry

(By Eugene Secor)

When I am dead, my leaden eyes
Will never see the flower that lies
Upon my casket, tho' the friend
May with its beauty warm tears
blend.

It in my lifetime he forgot
To give it, I shall see it not.

When I am dead, my spirit nose
Will never scent the proffered rose.
God made the roses for the living;
O, give them while I sense the
giving.

No perfume is so sweet to me
As present love and sympathy.

When I am dead, I'll never hear
Your cry of anguish o'er my bier.
Whether I'm loved, I'll never know
Unless in life you tell me so.

O, whisper in my senuous ear
Some words that to my heart are
dear.

—Wallace Farmer.

HONEY

Finest White Clover Extracted Honey, in 10-pound friction top pails, 6 pails in a wooden shipping case, at only \$6.50 per case. Same, Amber at \$5.00 per case. All f. o. b. Kinde, Address

Woodhull Honey Co., Kinde, Mich.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1.00**

THE LANDSCAPE GARDEN CO.,
Newburgh, N. Y.

ITALIAN QUEENS

Beginner's outfits and other supplies. Send for list. Address

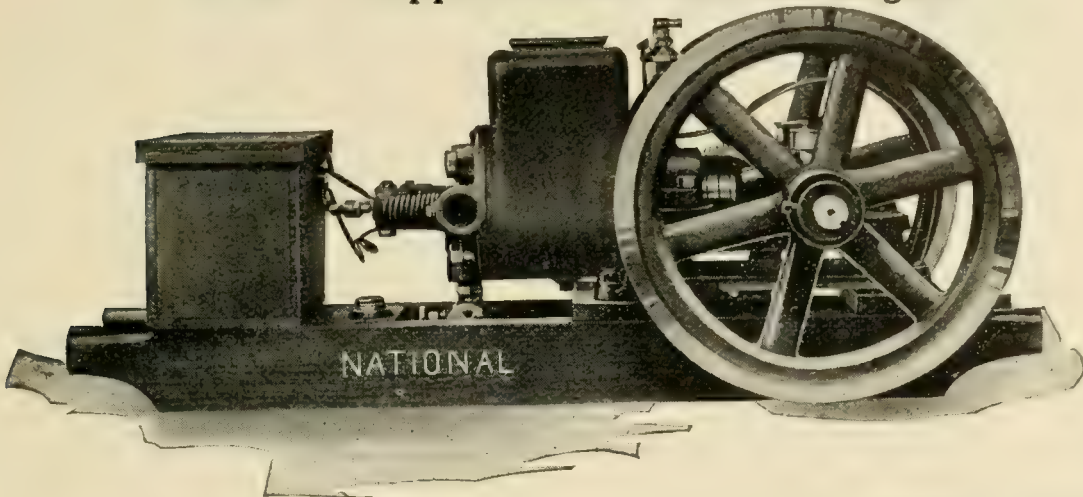
ALISO APIARY CO.,
Glendale, California

HONEY COMB AND EXTRACTED

We can furnish both comb and extracted honey to bee-keepers who have run out of their own product. All our honey is strictly first-class. Italian Bees and Queens in season. Write for prices.

LATSHAW HONEY CO.
Carlisle, Indiana

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncatered and supplied with fuel and lubricating oil.

Horse power, 1½; bore, 3¾; stroke, 4½; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1¼; floor space, 9x36; shipping weight 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

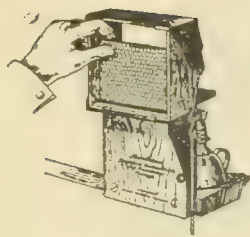
Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n., Northstar, Michigan.



Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," and cut without reading for their letter heads, envelopes or circulars can be furnished with them for 50c each, postpaid. Address

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.



KEEP MORE BEES, BETTER

A big step toward this goal in the production of Comb Honey, is the use of the new RAUCHFUSS COMBINED SECTION PRESS AND FOUNDATION FASTENER. Does more and better work than anything on the market. Price \$3.00, delivered anywhere in the United States. Satisfaction guaranteed, or your money back.

Send for illustrated circular today to
THE COLORADO HONEY PRODUCERS' ASSOCIATION
 1440 Market Street, Denver, Colorado.

Bee-Keepers' Supplies and Fruit Packages

We manufacture the famous Sheboygan hive, which always gives absolute satisfaction. Our perfect sections made from selected white basswood, are recognized as the best on the market.

Catalog now ready for distribution. Write for copy.

Sheboygan Fruit Box Company
 Sheboygan, Wisconsin

Celebrated Queens Direct From ITALY

Bees more beautiful, more gentle, more industrious
 The best honey-gatherers.

PRIZES:

Sixth Swiss Agricultural Exposition, Berne, 1895.
 Swiss National Exposition, Geneva, 1896.
 Bee-Keeping Exhibition, Liege, Belgium, 1896.
 Bee-Keeping Exhibition, Frankfurt O. M. (Germany).
 Convention of the German, Austrian and Hungarian Bee-Keepers, August 1907.
 Universal Exposition, St. Louis, Mo., U. S. A., 1904 The HIGHEST AWARD.
 Extra Breeding Queens, selected, \$2.00; Fertilized, \$1.50. Lower prices per dozen, or for more Queens. Safe arrival guaranteed. Write.

ANTHONY BIAGGI

Member of the National Bee-Keeper's Association
PEDEVILLA, NEAR BELLINZONA, ITALIAN SWITZERLAND.
 This country, politically, Switzerland Republic, lies geographically in Italy, and possesses the best kind of bees known.
 Mention in writing "THE BEE-KEEPERS' REVIEW."

DENVER, COL.—Beg to advise that the honey market remains still about the same. It is cleaned up on comb honey pretty well, and looks as though it would be entirely used before the new crop comes on. We are jobbing as follows: Strictly No. 1 white, fancy stock, per case \$2.52; Choice, good color and heavy weight per case \$2.39; No. 2, well finished, fair color per case \$2.25. White extracted, 8c, Light Amber 7c. We pay 32c cash and 31c in trade for clean yellow beeswax delivered here.

Colorado Honey Producers' Ass'n.
 F. Rauchfuss, Mgr.

April 23.

CHICAGO, ILL.—Honey has sold quite well during the past thirty days, and while stocks are not heavy, it takes some time to work them off as buyers can take only small quantities at this time of the year. There is not much

difference in prices. Fancy grades of white clover and linden bring from 14c to 15c per lb., sweet clover and alfalfa from 1c to 3c per lb. less with the light amber grades ranging from within 1c to 2c per lb. of the sweet clover. Extracted white clover and basswood 8c to 9c per lb., other white grades from 7c to 8c per lb., ambers about 1c per lb. less. Beeswax selling upon arrival at from 33c to 35c per lb. according to color and cleanliness.

R. A. BURNETT & CO.,
 173 W. South Water St.

April 17.

This good old world we're living
 in is mighty hard to beat—
 We get a thorn with every rose,
 but aren't the roses sweet?

Getting Our Honey Supply With Only Two Visits a Year

(By J. A. PEARCE, Grand Rapids)

(Continued from page 166)

off the white honey the latter part of July with little or no labor.

For the benefit of those who have not suitable loft room a building might be erected in the back yard for the bees one hundred inches long and seven feet wide with four sets of studding 32 inches from center to center making three spaces on each side in each put a window sixteen inches square and a shelf on each side twenty inches wide and twenty inches high the length of the building and a four inch fly entrance opening up and down for the bees, this house needs no floor and will accommodate six swarms of bees and worked on this automatic plan will supply more sweets than any family can consume. Then from this anyone can increase as much as they desire, as there is an unlimited field in this honey business before us. And it is most accessible. We do not have to under the ground or up in the air or out on the sea for it. It is right at our homes and in this artificial method of increase of queens and bees there are great possibilities in fact I believe there would be greater possibilities in a highly bred queen and the increase that could be made from her artificially than from two hundred elephants.

Some might think that in these tall hives the bees would work to disadvantage but this does not work out in practice. Some might also think that if the honey was left on until November, it would become badly travel stained, but this does not occur, perhaps because on crawling up through these tall hives the bees wipe their feet off well; and in these enormous colonies the honey is completely filled and sealed and fully ripened, fit for the gods. So we should all feel elated that we can now so easily procure such an abundant sweet supply with only two visits a year.

Become a National member.

"falcon" Bee Supplies

Shipping Cases, Extractors,
Hives, Etc. Everything for
the Bee-Keeper

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red Catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

PAGE-KENKEL MFG. CO.

MANUFACTURERS

of the

"NONE BETTER"
Bee-Keepers'
Supplies

Perfect sections from young, white, basswood, White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

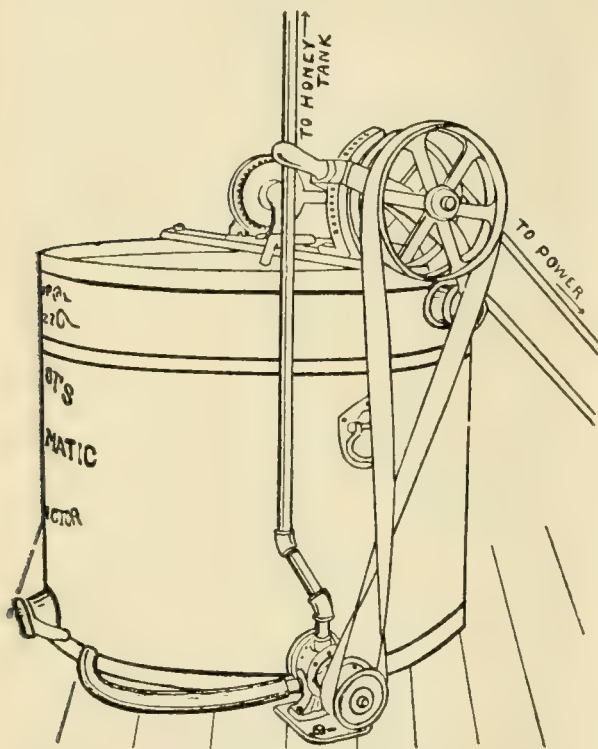
Guarantee:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

Page-Kenkel Mfg. Co.

New London, Wis.

Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP** then run them with a **NATIONAL 1½ H. P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and every-



Root Automatic Extractor, showing Honey Pump in Position

thing necessary pertaining to the outfit, at \$84.00.

Six-frame extractor outfit as above at \$92.00. Eight-frame extractor outfit as above at \$99.00. Without honey pump, deduct \$17.50. The engine shipped from Wisconsin and the balance of the outfit from Medina, Ohio. The National will take the money you hand us and buy the above outfit. **Directly from the manufacturer, at our one small profit system, on the co-operative plan. Address with remittance.**

**National Bee-Keepers'
Association**

Northstar, Michigan

Management of Three Thousand Colonies in Fifty Yards

(Continued from page 165)

the Caucasian stock. Therefore I cannot place too high an estimate on it. Moreover, the queens are very prolific throughout the season, breeding up very early in spring and enabling the apiarist to make a large increase, or land a great harvest. They are very gentle, and are never irritated to fury, nor do they boil out of the hives while the combs are being handled, but remain quietly on the combs. They make a very compact brood-nest, so that it is not necessary to have brood chambers larger than the average. They are great queen-cell builders, and as a rule build large cells, which helps to assure good queens. They requeen themselves more often, a fact that keeps younger queens in the apiary. This means fewer drone layers and dwindling colonies. They fill in well with honey around the brood-nest at the close of the season, and this as a rule insures plenty of stores for Winter and Spring. They are hardy bees, great honey gatherers, and also carry into their hives an abundance of pollen. They cap their honey a beautiful white, and fill out sections or frames well, being great comb builders. Also, they are slow to cap out thin honey, allowing it to ripen and acquire as heavy a body as possible. Their only bad feature is that they gather, at times when there is no nectar, considerable propolis or bee glue, but deposit it in wads just on the inside of the hive, or about the bottoms of the frames, which is easily removed.

Ypsilanti, Mich., Feb. 14, 1914

Editor Review:—Please take my name from list of members having honey for sale in the Review, as I am entirely sold out and am tired of answering inquiries from buyers to that effect.

FLOYD MARKHAM.

**LEWIS HIVES ARE BUILT LIKE FURNITURE
ARE PERFECT IN ALL RESPECTS**

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

Retrospect.

(Continued from page 164)

old hive will have lost most of its bees, and what remains consists of very young bees. The queen can be easily found and the hive returned to its old place.

Why Does Comb Foundation Stretch?

Why does comb foundation stretch or rather expand? That is the question asked and answered by Arthur Miller on page 272. His answer is characteristic of the man: "What an absurd question! Suppose you had been rolled out as flat as a pancake and sat upon by a lot of females, don't you think you would stretch yourself if you had a chance? I would."

Everybody knows that everything expands more or less when the temperature rises. If a cool piece of foundation is fastened into a frame and then put in the warm hive, a certain amount of expansion will take place and as the frame does not expand, or expands only very little the piece of foundation will necessarily bulge, or buckle or stretch, whichever term you choose to use. That expansion (or stretching) is very small and does no harm. But with the modern weed foundation, something else comes into play. The weed foundation is made by an enormous pressure on the wax sheets. This puts the wax in an unnatural condition and reduces its bulk. Under the heat of the hives, the wax softens and the molecules become movable and regain their natural positions, thus expanding the bulk of the wax and causing considerable bulging or stretching. The Ritsche press foundation made practically without pressure stretches but very little, not enough to give trouble. Mr. Miller says that some old foundation that had been stored in the attic for several years did not stretch. An attic in summer time is a very warm place. Very likely it had been warm enough to soften the wax and allow it to return to its natural condition.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one, \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame \$3.50; six two-frame, \$20.00; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

We are always in the market for

BEESWAX

and would be pleased to hear from you whenever you have any to offer. WE PAY CASH ON RECEIPT OF WAX.

FRANK C. CLARK

316 W. Kinzie St.

Chicago, Ill

GET TOP NOTCH PRICES FOR YOUR HONEY BY USING LEWIS SECTIONS AND SHIPPING CASES Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

"NONE BETTER"**"NONE BETTER"****WESTERN DEALERS, ATTENTION****This message is to you, the large users of Double-Tier Shipping Cases**

We make the best shipping case on the market and specialize on the double-tier for the Western trade. Tell us your needs and let us send you sample of a perfect shipping case and surprise you with our prices.

PAGE-KENKEL MFG. CO.

**Manufacturers "NONE-BETTER" Bee-Keepers' Supplies
New London, Wisconsin**

Under date of Feb. 12, Page-Kenkel Mfg. Co. write the REVIEW office in part as follows:

We really have an excellent stock for double-tier shipping cases and sections. We know that we have the best on the market and furthermore our prices are right as you will note from the enclosed jobbers' list, the prices that we make to car load buyers. We are right in the heart of the Basswood district and we have our buyer out looking for timber all the time. Naturally we pick up small lots in different places and we certainly get some excellent timber. We know that if we can break in on that western trade no one will get it away from us. Right now is the time that we ought to be making these double-tier cases, and while several of those large western dealers are dickering with us we haven't as yet closed with any.

We guarantee our goods absolutely and agree to refund any money and transportation charges to any customer who is dissatisfied for any reason whatsoever. We really do not know how to make our guarantee any stronger.

"NONE BETTER"**"NONE BETTER"**

30 DISTRIBUTING HOUSES FOR LEWIS BEEWARE

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

"Griggs Saves You Freight"**TOLEDO****"Griggs Saves You Freight"**

With four carloads of new goods on hand, we are now better prepared for the rush than ever. But don't wait to be in the RUSH. Send your order in now and have the goods on hand ready for use.

NEW ILLUSTRATED CATALOG OF 60 PAGES

We want one in every bee-keepers' hands. Send postal for one today. It is free.

White Clover Extracted Honey Wanted, also Beeswax in exchange for supplies. It will be to your INTEREST to get in touch and keep in touch with us.

S. J. GRIGGS & CO.**25 N. Erie St.,****Toledo, Ohio.****"Griggs is Always on the Job"**

GET TOP NOTCH PRICES BY USING LEWIS SECTIONS FOR YOUR HONEY AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

BE A HARD BUYER

BUY YOUR COMB FOUNDATION THE CHEAPER WAY

THE CHEAPER WAY---Ship your Beeswax to Gus Dittmer Company and have it made into any grade of DITTMER FOUNDATION you need.

Write for information before you sell your Beeswax.

Beeswax taken in payment for making your wax into DITTMER COMB FOUNDATION.

Ask for the new 1914 catalogue

GUS DITTMER COMPANY

Augusta, Wisconsin

SEND FOR OUR PRICES ON

BEESWAX

We are paying higher prices than ever before at this Season. WHY? Because of the tremendous demand for

Dadant's Foundation

Write at once. We will quote prices F. O. B. here or F. O. B. your station

DADANT & SONS

Hamilton, Ill.

Do you know
**The Youth's
 Companion**
 as it is to-day?

Improved and broadened in its scope. Enlarged by the addition of a Special Family Page, Boys' Page, Girls' Page and Chil-



FREE TO JAN. 1914

Cut this out and send it with \$2.00 for The Companion for 1914, and we will send FREE all the issues for the remaining weeks of 1913 and The Youth's Companion Practical Home Calendar for 1914.

THE YOUTH'S COMPANION, BOSTON, MASS.

dren's Page. Great serial stories, 250 short stories. A remarkable Editorial Page. Current Events and Science. A wealth of variety and quality, and all of it *the best*.

Illustrated Announcement for 1914 free on request.

Remember — 52 Times a Year, Not 12

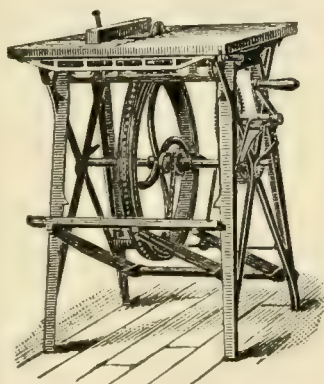
Great Family Combination Offer

We do not know of any Family Weekly that we can more heartily recommend to our readers than The Youth's Companion. It gives us pleasure, therefore, to announce that we have arranged with the publishers to make the following offer.

**THE BEE-KEEPERS' REVIEW
 THE YOUTH'S COMPANION**

Regular	\$1	Both Papers Together 1 Year for	\$2.50
Price	\$2		

To take advantage of this club rate send all subscriptions to
 THE BEE-KEEPERS' REVIEW, NORTHSTAR, MICH.



MAKE YOUR OWN HIVES

Bee-Keepers will save money by using our FOOT POWER

SAWS

in making their hives, sections and boxes. Machine on trial.
 SEND FOR CATALOGUE.

W. F. & JNO. BARNES CO.

384 RUBY STREET

ROCKFORD, ILLINOIS

Working Beeswax

In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500Lbs.	300Lbs.	100Lbs.	50 Lbs.	25 Lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.

Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation $\frac{1}{2}$ can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Members kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "National" also, put your mark on the packages so your wax can be recognized and mail the bill of lading also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Ffg. Co., Falconer, N. Y.; Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE NATIONAL BEE-KEEPERS' ASSOCIATION
NORTHSTAR, MICHIGAN

Pack your wax in double sacks. Use no paper or other packing.

Friction Top Honey Pails and Cans



The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

	Capacity Approx.	Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2 lb. Can.....			\$2.25	\$2.15	\$20.00
2 ½ lb. Can.....			2.75	2.60	24.00
3 lb. Can.....			3.00	2.85	28.00
5 lb. Pail.....	\$5.00		4.75	4.50	42.50
6 lb. Pail.....	5.25		5.00	4.75	45.00
10 lb. Pail.....	7.00		6.50	6.25	60.00
12 lb. Pail.....	7.25		6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2 ½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

Address all orders to

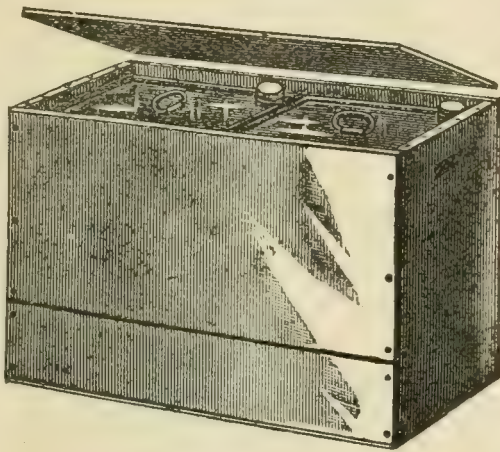
The National Bee-Keepers' Association
Northstar, Michigan

Tin Honey Containers of Quality

for National Members

Of standard size and guaranteed to be the best to be had at any price.

Specifications of the 60-lb. Can.



Five-gallon Square, Round-Cornered Cans, 9 3-8 inches square by 13 7-8 inches high, with wide handle, paneled sides and 1 3-4 Cork-lined Screw cap.

Above cans crated 50 cans in a crate, **20c** each.

Above cans cased singly with case having 7-8 inch ends and 3-8 inch sides, tops and bottoms, **33c** each.

Above cans cased in pairs with case having 7-8 inch. end and 3-8 inch sides, tops and bottoms..... **60c** each

Above cans cased in pairs as above in lots of 250 or more cases **\$59** per 100 cases

Above Cans in lots of 500 cases **\$58.50** per 100 cases

The above 5-gallon cans with 8 inch screw cap, add 11c per case of two cans. Add 5c for cans cased singly, if wanted with 8 inch screw cap.

One gallon square round-cornered flat top syrup cans, with screw caps. The finest can in the world to sell honey direct to the consumer in, and we have had the manufacturers make us some wooden re-shipping cases, the same as those on the regular 60-lb. honey cans, so they will go by freight the same as the larger cans.

Above gallon cans in wooden case, 6 cans in a case **60c** per case
10 cans in a case..... **95c** per case

We quote them in crates of 50, at \$7.00 per hundred cans.

Address all orders to

National Bee-Keepers' Association
Northstar, Mich.

Gleanings in Bee Culture

FOR 1914

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake bee-keeper whether he has but one colony, a small suburban apiary, or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT—

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES—

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance, and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies, and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1 — WINTERING—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14, which experiments will be published in this number. We shall also give our own experience summed up as to feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you cannot afford to miss such a wealth of information as the subscription price, \$1.00 will bring you.

The A. I Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly



JUNE
1914

▼ ▼ ▼
NORTHSTAR,
MICHIGAN

ONE DOLLAR PER YEAR

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The members's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write his office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzl, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.
G. M. Withrow, Mechanicsburg, Ill.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint—Cotton Blend

Wilmon Newel College Station, Tex.

Raspberry

F. D. Stephens, Box 383, West Branch, Mich.

Alfalfa

A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.
C. Stimson, Route No. 1, Holly.

Amber

G. Frank Pease, Marshall, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Guirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.

Mesquite

Arizona Honey Exchange, Tampe, Arizona.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franks-ville, Wis.

Clover and Basswood Blend

Elias Fox, Union Center, Wis.
Dr. C. G. Luft, Fremont, Ohio.
Frank Kittinger, Caledonia, Wis.

White Clover

E. F. Smith, Chadwick, Ill.
B. F. Schmidt, North Buena Vista, Iowa.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co. Wis., No. 19.
Byron S. Hastings, Rt. 5, Brookville, Ind.
S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
Orville Safford, Fort Edwards, N. Y.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snyder Bros., Center Point, Iowa.
Dr. C. G. Luft & Son, Fremont, O.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, La Mars, Iowa.
A. S. Crotzer, Lena, Ill.
W. H. Pearson, Mitchellville, Iowa.
John S. Coe, Boyce, Va.
M. H. Lind, Baders, Ill.
Frank Kittinger, Caledonia, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prisk, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
Niels A. Nelson, Dike, Iowa.
Geo. E. Capwell, Cottonwood Falls, Kansas.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Charles Lotz, Monroe, Iowa.
Dell E. Berryman, 2308 20th ave., Central City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
Mangrove, White as Clover
A. F. Brown, Hawks Park, Fla.
Partridge Pea
J. J. Wilder, Cordale, Ga.
Buckwheat
Jas. McNeill, Hudson, N. Y.
E. A. Duax, Chippewa Falls, Wis.
Wilmer Clarke, Easlvile, N. Y.
Hwajilla
Frank Talbot, Pearsall, Texas.

Bees for Business

Italian bees of youth and vigor in combless packages, delivery guaranteed, will be shipped express prepaid during May and June from Southern New Mexico to Colorado common points at \$1.50 a pound, other points at proportionate rates.

1913 Production

Two pounds of bees with queen last year made me one hundred pounds of comb honey—the equal of any of my colonies.

Bright Prospects

There will be honey in the west this year for we have snow in the hills, moisture in the soil and the clovers are so thrifty they are hardly waiting for the season to arrive.

Preparations

You will have the bees if you order packages without queens to strengthen those weak colonies with good queens; and two pound packages with queens, not over one year old, to fill your empty hives.

My Proposition

Full weight, prepaid deliveries will be made during the first three weeks of May; or June deliveries if you prefer.

Two pounds of bees with queen delivered at Colorado Common points for \$3.50.

Two pounds of bees without queen delivered as above for \$3.00.

Other points more or less according to express rates.

Order at once if you want any of these bees at the above prices.

Shipments will be made in two pound packages unless special arrangements are made

Wesley Foster
Boulder, Colorado

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping: DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping cases are dandies.

Ask for our catalogue of supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

Our Very Best is THE Very Best

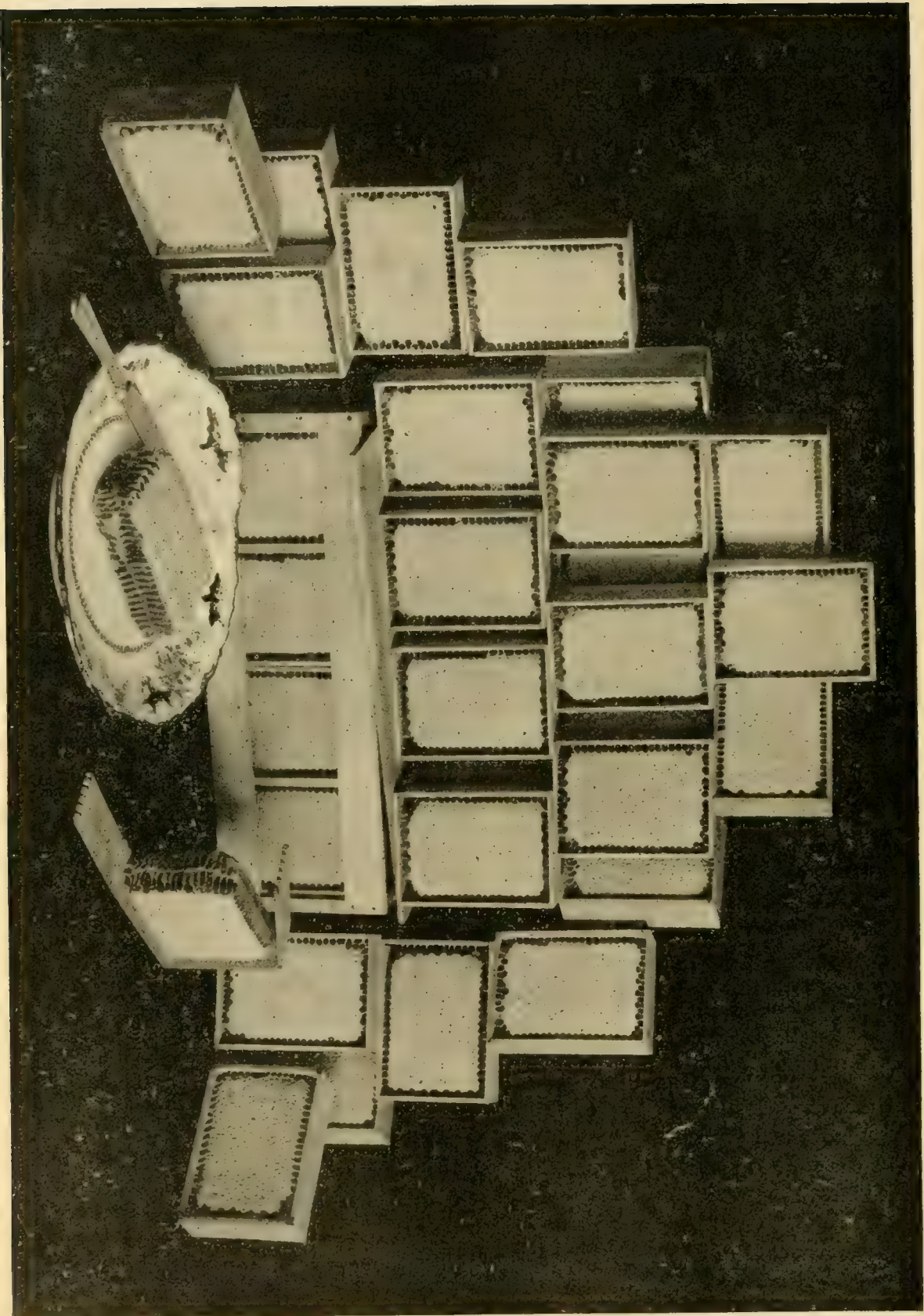
Best Sections

BEST Shipping Cases and Dealer in BEST Bee Supplies

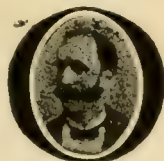
We make a specialty of manufacturing Best Sections. They are the FINEST in the land, none better. When you once buy Lotz Sections you will want no other. Now is the time to buy and have them when the honey flow is on. Prompt shipments. Our bee supply catalogues for the asking.

Aug. Lotz & Co.
Boyd, Wis.

AN "INSPIRATION"



The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson.

OFFICIAL ORGAN OF THE NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Mich.

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo. PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter, December 9, 1913, at the postoffice at Northstar, Michigan, under the Act of March 3, 1879.

TERMS—\$1.00 a year to subscribers in the United States, Canada, Cuba, Mexico Hawaiian Islands, Porto Rico, Philippine Islands, and Shanghai, China. To all other countries the rate is \$1.24.

DISCONTINUANCES—Unless a request is received to the contrary, the subscription will be discontinued at the expiration of the time paid for. At the time a subscription expires a notice will be sent, and a subscriber wishing the subscription continued who will renew later, should send a request to that effect.

Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII

NORTHSTAR, MICHIGAN, JUNE 1, 1914

No. 6

The Temperature of the Honey-Bee Cluster in Winter

By E. F. PHILLIPS, Ph. D.,

In Charge of Bee Culture Investigations, and GEORGE S. DEMUTH, Apicultural Assistant

The care of bees in winter is one of the most perplexing problems confronting the bee-keeper, especially in the North. This appears to be due chiefly to the fact that it is difficult to determine by direct observation the normal activities of the bee colony in winter, and consequently it is well-nigh impossible to determine what external conditions are most favorable except by the gross results of experience. Nor can we by a study of our wintering successes and failures determine definitely whether the same conditions of temperature and humidity are desirable throughout the entire winter. On account, therefore, of the lack of accurate knowledge of the activities of bees in

the winter season this problem has been taken up with the aid of certain special apparatus and equipment. This preliminary report is not to be considered as giving definite recommendations as to the care of bees in winter, but rather is issued to make known to bee-keepers some of the interesting results obtained in the first season's work on the behavior of the bees during the winter season.

American bee-keepers lose thousands of dollars annually in winter from the actual death of colonies and even still more from those colonies that do not die, but which are reduced in numbers and vitality. The wintering problem is therefore a vitally important one. The factors influencing the welfare of the colony and behavior of the bees are numerous and closely interrelated. Of the chief ones may be

mentioned external temperature food, ventilation, humidity, the condition of the colony at the beginning of winter, and various forms of irritation. In the present paper special emphasis is placed on heat production, by which is meant the responses of the bees of the cluster to the outer temperature and to changes in the outer temperature as manifested in the generation of heat by the bees.

A special reason for this emphasis in a preliminary paper is that all previous work on the temperature of the cluster in winter, of which there has been considerable has failed to show definitely what the normal responses are. The data are often those of abnormal conditions and are therefore misleading, making them almost valueless for purposes of application. One source of error which is to be found in all the records known to authors is the use of the mercury thermometer, for, when such a thermometer is used, it is almost impossible to avoid disturbing the cluster at each reading so that it reacts abnormally. Furthermore, as the authors will attempt to show at a later time, disturbances of the colony may influence the temperature of the cluster for a considerable period, often more than one day. Usually no account has been taken of the necessary corrections to be made for the mercury thermometer.

Because of the errors in other work on the subject, due to the use of mercury thermometers chosen for the work here recorded are of another kind. Electrical thermometers are used, by means of which readings can be made without approaching the hive, and the thermometers (couples) are of course permanently fastened in place. These are of the type known as thermocouples or thermal junctions and the readings are made by means of a potentiometer indicator and a sensitive galvanometer of the d'Arsonval type. The wires used in the thermocouples are copper and constantin (a copper-nickel alloy), giving an electromotive force of about 40 μ V per degree centigrade. A detailed description of the apparatus is impossible here, and it need only be stated that the method as used gives readings to

an accuracy of 0.09° F. (0.05° C.); the thermometers are practically instantaneous in their action—that is, show changes in temperature without a “lag;” the readings of many thermometers can be made consecutively on one carefully calibrated instrument, insuring uniformity which is impossible in using many mercury thermometers; and, a point of importance in such work, the readings can be made at the rate of two a minute, which would be impossible with widely scattered instruments. In all, 161, 617 temperature readings were made during the winter 1912-13, and the work is being continued.

Part of the colonies are kept in a well-insulated room (used as a “bee cellar”) in the zoological laboratory of the University of Pennsylvania, Philadelphia, Pa., which can be kept at a temperature usually varying not over 2° F., far more uniform than the ordinary bee cellar. Abundant ventilation is provided, and the room is completely darkened to avoid possible disturbance by light. The temperatures of the indoor colonies are read from an adjoining laboratory to eliminate the possible errors due to disturbance, and the room is entered rarely (about once a week on an average and, if possible only after the day's records are made) and only when absolutely necessary. It is found that entering the constant-temperature room may under some conditions influence the behavior of the bees in a marked manner.

Other colonies are kept on the roof of the same laboratory, where they are left untouched from the beginning to the end of a series of readings. The wires of the thermometers are led to the room below through rubber tubes, and all the temperature readings are made at a distance, as is absolutely necessary to eliminate disturbance. Disturbances of outside colonies have also been found to influence their behavior in a pronounced manner, especially in cold weather.

By studying the temperature of various fixed points within each hive it has been found possible to use the temperature readings as a substitute for direct observations. After becoming familiar with the
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Review for the Review

By J. A. PEARCE

Author of Pearce Method of Bee-Keeping

I have just overhauled five colonies of bees for Mr. Huntley Russel on the old C. C. Comstock Dairy farm on the car line to the Soldiers' home and fair grounds, Grand Rapids. These bees were in single bodies as about every one but me, is keeping his bees, only they were in an exceptionally fine location for honey, and there was left on each hive a full case of last year's honey, from white clover and above this was spread a piece of Burlap and a cap filled with chaff and so they had wintered well although they were in as exposed a place as you could well see. They had the full sweep up the river valley for at least three miles of our terrible South Westerns. I have changed these bees from the single hive method to mine of the double hive as practiced by me, and I thought I could not do better than tell the readers of the Review just how I did it and what I did it for. So listen.

These bees all in 10 frame hives but one. I wish it had been the other way for my creed says that two 8 frame hives makes a hive large enough. Not that a double 10 frame hive is too large for the bees, but its parts are too heavy to handle easily when filled, especially for women, and as we are going to have women keep bees by this method as well as vote, we are studying their interest in this matter. The first thing I did when I got on the job was to change this 8 frame hive into a 10 frame body and add 2 combs by spreading the brood that I found from side to side and put the 2 empties in the middle. Then I looked the other over to note their condition and see if they needed equalizing but as I found all full from side to side with brood, this 18th of May which I considered fine as the season and bees have both been backward, I concluded all was right and no equalization necessary. I had brought along five 10 frame

bodies filled with empty combs besides the empty body to put the 8 frame hive into. I wanted Mr. Russel to build a shelter for the bees on right lines, but he said they had all kinds of buildings on the farm and he would build no more, so we looked the premises over and found an old driving shed for the former feed mill. This was filled with all manners of By-gone farm appliances including the memorable one-horse chaise. While I was looking over the bees, Mr. Russell was "clearing deck" as it were for action to make room for the bees and we proceeded at once to build a shelf 20 inches high along the south wall. The studding was 6 inches wide instead of 4, so we had a good face to nail our supports for our platform to and we made 6 inch pockets instead of our 4 inch pockets we make where the studding is 4 inches, and I wish to digress here for a moment to say that if I had never done a thing in my life but devise this 4 inch pocket and urge bee-keepers everywhere to put their bees under shelter above ground. Peter had ought to let me through the Gate, when I will soon go up, for I will be 71 in 10 days if I live that long. Well the shelf was completed and fly holes cut through the wall by 6:30. Pretty good time for it was 3:30 when Russel's auto came on the ground with the fixtures and tools. The farm help got their suppers and were very willing to help and to learn something different than they had known. We had not a minute to spare for the bees had gone in and they were to be moved about 20 rods to the shed from where they sat in the large open garden about 4 rods from the house. The farm manager and Mr. Russell carried the hives one at a time to the shed and put them on the permanent shelf, while I prepared them by stopping the entrance with rags pushed in place

with my screw driver. Rags are a bully thing to stop the entrances with for long or short distant movement.

You will notice I had not yet put the extra hive bodies on preferring to do that after the bees were moved for the comfort of the movers and other reasons and it was now dark so I did not dare tackle the job and so agreed to come back the next afternoon to finish up, so I had the farm manager place these 5 bodies on where the bees were removed from to catch the bees that would surely go back to the old stands as the weather was exceptionally fine and warm both days. This was a wise precaution for there was a lot of bees went back to the old stands as I felt sure there would, and so I did not sleep good as I did not know just what might happen, or how I might get these bodies onto the hives where they were wanted to be and needed with these lost bees that had been making it anything but pleasant for the help and the children in the big farm house. When I got on the scene again about 3:30 I found a seething lot of bees about these

hive bodies not in the best of humor, but not really offering to sting much as it was in the midst of apple and other blooms so all were well filled with honey and loaded with pollen that they did not know what to do with. They did not want to deposit it in those hives without top or bottom, no queen there or any young to likely need the pollen, and what to do they did not know. They seemed to make me think of those poor fellows to the south of us in a naked country with no government, fighting they know not what for, but I brought along some new oil cloths as I had discovered there was only old burlap to cover with. I put these over the bodies and this seemed to add a little to their comfort and as night drew on they quieted down and many of them gave up their tenacity for their old home and went back to the new situation as chickens which have scratched all day in their neighbor's flower bed will go home to roost, so after a good supper in the big house, we loaded these hive bodies on our carrier quietly
(Continued on page 225)

Management of Three Thousand Colonies of Bees in Fifty Yards

By J. J. WILDER, Cordelia, Ga.

From 1000 to 1200 Colonies in 16 Apiaries

At the end of this article our bee-keeping takes a change. It might be said, that it took a long time for me to reach the 1200 colony mark; but it takes capital to establish a large bee business. To make it all out of the business it takes time and much energy. When, at the end of the season, I had over a Thousand Dollars above all expenses, I decided to invest it in bees in another field. The results will appear in future articles. My manner of procedure was about the same as before. I invested the returns in the business where I thought the results would be most profitable and would require least time. It might be thought that my main building is of brick or even

of concrete; far from it. It is only a cheaply constructed wooden building, but with plenty of room, and every convenience. The necessary equipment inside is not heavy nor even the latest improved, such as power driven extractor, etc. A much cheaper and lighter outfit was all that I needed as yet. For only one third of product consisted of extracted honey. At every outyard is a galvanized sheet-iron building just large enough to hold the necessary supplies for that year; such as supers, hive bodies, bottoms and covers. In this building is a small stout shelf which we use as a work bench, for nailing up hives and fixtures, whenever such come apart. There is also on this shelf one Wilder foundation fast-

ener, for putting foundation into either shallow or deep frames. This is an invention of the writer, and solves the problem of fastening foundation into frames to his satisfaction. This device has been worth hundreds of dollars to me.

What about hives, etc? I have endeavored to use the best material I could afford. All deep frames have been wired, and full sheets of foundation are used in every frame and section. This is real economy.

All my bees are located under natural shade, and no extra cost is incurred on this score. For a number of years I painted all my hives, but since I have been using cypress lumber for hive-making, I have abandoned that feature, which was no little expense. Cypress hives need no painting. After being used for some years, they turn a slate color, and need no painting for looks. For hive stands I use solid blocks of wood, one under each end, which elevates the hives only 6 or 8 inches from the ground. This job does not need to be done often; we can have more time to give to other things.

Locating Yards and Number of Colonies in Each—

All yards are located not less than two and a half miles apart, the farthest apart being about 4 miles. The yards are located in lines that lead out from town in nearly all directions; they lead along the main highways or as near to them as possible for convenience and water. Sometimes to do this, we have had to follow a settlement road for half a mile, but as there are many creeks, and lakes here, we do not have to locate, as a rule, far from the main road. The most of the lines only run out to four yards. One line extending out to, and along, the river, has 6 yards on it, and another, that extends in another direction, has 7 yards on it. The farthest yard is over 30 miles distant.

My town is a great railroad center, and R. R. lines extend in nearly every direction, with stations every three or four miles. Naturally the yards are located near stations, and nearly every yard can be conveniently reached by rail, enabling us to cover the field

rapidly and do the necessary work during the rush season. No automobile or motor truck is needed for this purpose. All this I had in view when I started in the business. The yards are located within a few steps of lasting water supply, either in spring, creeks or lakes, but at a safe distance from high water mark. The two longest lines of apiaries run out in opposite directions, each to a river, for there is a river on either side of my bee-territory. The apiaries wind about, following the windings of the streams. In a subsequent article I will draw a map of my system of apiaries.

The number of colonies in the different yards runs from 40 to 120, according to the amount of bee-pasture, and the results in honey, and the ability to sustain a given number of colonies without feeding.

Overstocking can not be determined except by keeping a certain number of colonies in a given location, for several seasons. More colonies will become weak as a result of overstocking, when honey flow is weak..

All Honey Hauled to Home Yard For Packing

After a few seasons trial I abandoned the practice of packing honey at each yard, and now carry all to the home yard for packing. For convenience, and to solve the labor problem, I had to do this. I begin taking off and hauling in honey as soon as it is finished, leaving it right in the supers, until it reaches the packing room, where it is at once removed and packed. If the honey is extracted, the combs are set right back into supers, and carried back by the wagons going after more honey, and placed back on the hives. If the comb is cut out and packed as chunk honey, full sheets of foundation are immediately put in place, and carried out in like manner as combs. If storing room is not needed, the prepared supers are set in the bee house at the yard, to be used when needed. Even the yards 30 miles away are thus managed.

You are invited to become a National member.

EDITORIAL CORNER

We are now hoping that no more freezing will occur as the fruit would suffer, but more serious for the bee-men, the alfalfa would be injured and the surplus materially reduced. We also are anxious for a hot summer, and hot and dry will suit us better than wet and cold. The ideal condition would be a hot summer with one big rain in July and another early in August with hot weather succeeding both rains.—W. F.

Hives on Scales

Never before have we been so impressed with the importance of having at least one hive on scales. This year we put Number 26 on scales before the flow started. It was not a strong colony, hardly an average colony as the records show. Here is the record:

Jan. 9, eggs in two frames; Feb. 4, four frames brood; Feb. 18, five frames brood, Feb. 22, 6 frames and marked O. K., which means ready for supers, when flow begins. Flow began about Mar. 10th, but no gain in weight till

Mar. 17, wt.	62½ lbs.
Mar. 18, wt.	65½ lbs.
Mar. 19, wt.	67½ lbs.
Mar. 20, wt.	71 lbs.
Mar. 21, wt.	71 lbs.
Mar. 22, wt.	71 lbs.
Mar. 23, wt.	71 lbs.
Mar. 24, wt.	76 lbs.
Mar. 25, wt.	81½ lbs.
Mar. 26, wt.	87½ lbs.
Mar. 27, wt.	92½ lbs.
Mar. 28, wt.	101½ lbs.
Mar. 29, wt.	102 lbs.
Mar. 30, wt.	110 lbs.
Mar. 31, wt.	110 lbs.
Apr. 1, wt.	124½ lbs.
Apr. 2, wt.	128½ lbs.
Apr. 3, wt.	142 lbs.
Apr. 4, wt.	147½ lbs.
Apr. 5, wt.	150 lbs.
Apr. 6, wt.	149 lbs.
Apr. 7, wt.	151 lbs.
Apr. 8, wt.	154 lbs.
Apr. 9, wt.	154 lbs.

Season ended.

It is with special reference to the dates, Mar. 29 to Mar. 31st and Apr. 3rd to Apr. 5th that the value of scales was demonstrated most forcibly. Notice that on the former dates, the colony gained its greatest, from eight to ten pounds daily. Had it not been for the scales, I should not have been prepared to give surplus room rapidly enough and swarming would have got ahead of all possibilities of control; as it was, when I saw the great gains being made, I examined ALL colonies at once, and with the result that added surplus room was rushed on all hives, in post haste, saving the day.. The bees did not seem to be working any more rapidly, but carried apparently more honey; or at least, a more thoroughly ripened honey, resulting in more net gains per day, at least (Has anyone else noticed this peculiarity as a honey flow approaches its height?) The second date named was instructive and helpful in this viz., it told me that honey was still coming in at a rate sufficient to endanger the surplus room, if hives were not watched. I had estimated the end of the flow about that time and was letting up on giving of extra room; had it not been for the scales, I should undoubtedly have lost much from lack of room on some hives.

It was interesting to note that the hives lost about 1 pound overnight, no matter whether it gained three pounds or eight. I attributed that to the greater amount of water content in the nectar in the earlier stages; after the height of the flow was passed, and the gain daily was less, say two or three pounds, the loss overnight remained about the same as before, that is, one pound. I would have expected a smaller loss. The three days of standstill, Mar. 20th, following were the days of that delightful (?) experience of Winter in the lap of Spring, that our northern friends enjoyed (?) so much!

E. G. B.

You are invited to become a National member.

We would soon have a pretty mess here in the west if we tried the transferring plan of Mr. Wilder especially where he leaves the bottom and the top of his "gum" exposed while the bees are working their way up into those new hives. Our bees out here would be inclined to help the colony being transferred get rid of that honey. We do not find it safe to leave honey exposed to bees for weeks at a time as Mr. Wilder infers he does. We can safely do it during the heavy flow but that usually does not last very long. Or do you find Mr. Wilder that the bees protect the combs and honey in the "gum" from robbing bees during the time they are carrying it up into the new hive?—W. F.

We are just in receipt of a letter from Mr. O. O. Poppleton, of Stuart, Fla., in which he says that he has sold out his entire bee interests in Florida and is going north to spend the summer, at least, with his children. He will probably not resume the apiarian end of the work in Florida at all. We are very sorry to learn that so wide-awake and accurate an observer and so thorough a bee-man has gone or will soon go from Florida; and doubly sorry, from the cause alleged, which is, that of failing health. We are looking forward to having a talk with Mr. Poppleton on his way north this month, and also glad to learn that he is to stop a while at Medina, O. and see "The Home of the Honey Bee." We envy him that treat! We shall try our best to get some sort of article from the pen of this versatile and careful writer, for the columns of the Review.

E. G. B.

Alfalfa and sweet clover are now, May 6th, about six inches tall and growing very rapidly. The precipitation so far this year is two inches above normal or something over six inches. The rain seemed for a while to be determined to continue and not give the fruit bloom and dandelions a chance but it has now cleared up and the bees have been booming on the dandelions and

fruit bloom, although apple trees are not yet in bloom. A good many colonies are preparing to swarm and we have cut queen cells in a number. This is the earliest that we have done this that I can remember. When appletrees bloom there will be something doing in our yards as the majority are full of bees and brood. A few days of good flow from apple bloom will bring about swarming. We will make our increase in May this year, or the most of it, and if there is not enough bloom to support the bees till alfalfa yields nectar, we shall feed. It pays to feed between fruit bloom and alfalfa flow and keep the bees breeding up. Feeding between these two flows beats fall feeding in these parts. You might do all the fall feeding you want to; if you have a good queen she will use all of it up before alfalfa blooms. Understand I am not against fall feeding, but feeding in May for colony support, and stimulation on the side, also pays.—W. F.

Mr. James A. Pierce says in the April number of the Review that he thinks that extracted honey production is very largely responsible for the spread of foul brood. It is undoubtedly responsible, for the spread of foul brood to a certain extent, for we know how difficult it is to control the disease when running for extracted honey. Some western producers have given up producing it on account of the way the infection is carried from hive to hive in the extracting frames. But Mr. Pierce has it a little strong when he says that extracted honey production is largely responsible for the spread of foul brood. I would say that the indiscriminate moving of bees and used bee supplies, together with the shipment and sale of honey from diseased hives is largely responsible.—W. F.

Occasionally you will find an honest man who is not a business success; but never a very successful business man who is not thoroughly 24-hours-a-day, honest.

Conditions on East Coast

The Palmetto will begin to open in two weeks, and the forest fires have been unusually severe there, owing to the dry weather, still there is always enough of the palmetto left in the places too damp to burn, to give a good surplus if the weather conditions are right. The past two years have been rather poor for honey from Palmetto; about every third year is a good palmetto year; we are due a good year this season, therefore Remains to be seen whether! The Mangrove is always thrifty. It suffers no setback, save a big damaging statewide "freeze." Its roots being in salt marsh it never lacks moisture. All that it requires is weather of the right sort. Some seasons it will be covered with bloom, the racemes of blossoms showing pinky white and yellow all up and down the limbs and branches, and not a bee near them. When conditions ARE right, however, a bee can fill up from one blossom, and not exhaust the nectar in it, either. Last year was a pretty good Mangrove year; two months later we can tell better what this year will do.

E. G. B.

Secretary Williams, as will be noted by this month's Secretary's Corner" is sick in bed and we are informed that many letters remain unanswered on this account. The friends will bear with him and wish him a speedy recovery. It will be noted that even on his sick bed, he still thinks of the work he has undertaken, that of putting bee-keeping upon a better paying basis, by making a better demand for honey through his scheme of popularizing honey with the masses. The undertaking is a deserving one and ought to have the support of progressive producers in general.

Honey Cooking

In the April number of the Review, our wideawake Secretary asks (page 139) "Has anyone any GOOD and tried ways of using honey in baking?" Friend Williams here are a few that I am willing to back up (or eat up!) any time

my wife will make them up; I can assure you there is nothing finer in their line.

1—Basler Leckerle (Not "Teek-erle," as in the Apr. Number, page 130).

Two cups honey; one cup sugar; one teacup of almonds, unblanched, chopped; boil and cool, then add one cup candied citron and orange peel, mixed, chopped. A little grated lemon rind, one teaspoon soda, half a nutmeg, grated, half a teaspoon cinnamon, half a teaspoon allspice, half a teaspoon cloves; one wine glass brandy, and flour enough to make a stiff dough. Roll out while warm, cut into oblongs, and bake in moderate oven. Let soften two to three weeks, then ice with confectioners' icing, that is, confectioners' sugar and boiling water.

(You may omit the brandy, if you wish. It is an old European recipe, and calls for the brandy; we think it is better with it. But DON'T forget to let the cookies stand for two weeks at least, before that time they are hard as bricks, after that, they are "jaw-leescious.")

2—A Simple and very Satisfactory Cooky for Everyday:

One tablespoonful lard; one cup honey; a little soda, and flour to make a firm dough; roll, cut and bake till light brown. Ice the next day. For the lard, one egg may be substituted, but the lard seems to soften them more quickly. We find these much superior to the usual sugar cooky.

3—Brown Bread:

Here is a tested recipe for Brown bread with raisins. One cup sour milk; one teaspoonful soda; three quarters cup honey; two cups graham flour; one teaspoonful salt; one cup raisins, chopped; beat thoroughly, bake in a moderate oven, thirty to forty minutes.

All honey baking scorches easily, and must be watched, and in a moderate oven.

Here are three candy recipes that we guarantee to please the little folks and the big folks too.

1—Pop Corn Balls:

Boil honey till it forms a soft ball in water, then drop popped

corn into this and stir, and form into balls while warm. For a special treat add some chopped nuts.

2—Pulled Candy:

Instead of using all sugar or all molasses, for pulled candy, try half honey and half sugar and see if the improvement in flavor is not worth while.

3—Honey Nougat:

Honey Nougat needs a little care in determining the exact point at which to stop the boiling, but it is certainly worth the trouble.

Three cups sugar; two thirds cup honey; two thirds cup hot water;

boil till it makes a firm ball in water, or just before it threads. Add two thirds cup chopped nuts, and beat the whole into the white of one egg beaten stiff; beat until somewhat cool, then pour on greased pan. Cut when cold but not yet too firm.

Fine flavored honey is better for all candy than common darker or stronger honey. Try both and see for yourself. Who says all flavor is driven off by boiling or cooking? I shall be glad to hear reports from any who try these .

E. G. B.

Field Notes From Michigan

By FRANK ERIC MILLEN B. Sc.A. East Lansing, Michigan

The season has arrived when bee-keepers should clean up all foul brood that may be in their apiary.

In large territories, where there are but few inspectors it is impossible for them to visit each bee-keeper with foul brood in his apiary, in time for the apiarist to treat the diseased colonies at the most opportune season. Therefore it behooves every bee-keeper to act as his own inspector and if the official inspector does not come round just after the clover flow, or any other good honey flow, commences, then the bee-keeper himself should go through with the treatment, rather than waste valuable time.

In these days, when there are so many bulletins on bee-keeping and bee diseases, every apiarist should be able to identify the various diseases. After a little reading and a visit to the suspected colony, the symptoms of the foul brood and sac-brood diseases should be so thoroughly fixed in the mind of the bee-keeper that there will not be any fear of not noticing the disease when it appears.

If by any chance you have not got a bulletin on bee diseases and their treatment, write directly to the Department of Agriculture, Wash., D. C. for their list of bulletins. You may also be able to obtain

these bulletins from your State Agricultural college, free of charge. Get all the bulletins you can and share the other fellow's ideas.

It would take too long in these notes to give the symptoms and treatment for the various bee diseases, but every bee-keeper should have these descriptions at hand, so that he can refer to them at any time and assure himself that his bees are not affected with disease, or if they are, then he is in a position to treat before the disease becomes serious.

When treating colonies, one must double up to make the colonies as strong, if surplus honey is expected, but if the bee-keeper would rather keep up the number of colonies there is not the same need for doubling up.

If a bee-keeper has only one or two colonies with foul-brood it may pay better to suffocate the bees and burn up frames and combs, afterwards scorch the inside walks of the hive. Where foul brood is prevalent in the district, it is a different questions and careful treatment should then be resorted to.

It is hard to place too much emphasis on the need of extreme care and thoroughness in the treatment of colonies for foul-brood. Many bee-keepers, while treating

(Concluded on page 226)

Field Notes From Iowa

By J. W. STINE, Salem, Deputy Inspector for Iowa

Some colonies in southeastern Iowa made preparations for swarming the latter part of April. I had 20 colonies to start with nearly one-half of these were making preparation for swarming the 1st week in May. The dandelion and fruit bloom starting so early gave the bees a fine chance to build up strong early. Some supers were put on the latter part of April. This is the earliest I ever knew them to be ready for the supers. There will probably be quite a little fruit bloom surplus honey if the weather is favorable through May.

I find my select tested Italian queen purchased from Mr. Dadant last season far surpasses my barn-eolean queen in every point. She was built up in bees the last of April, so I put the supers on her hive and am raising some fine queens from her this season. I al-

so find the Italians are more gentle.

The field meeting which is planned to be held in Mt. Pleasant July the 28 promises to be a meeting of great interest. It is expected we will have several bee-keepers from Illinois and Missouri present. All the men who have been assigned subjects have said they would be present. The program and more of the particulars will occur in the July number.

We have found that the localities visited last year in the inspection work comparatively free from disease.

We would be glad if there would be any of the bee-keepers of Iowa having experiences or new plans of general interest to bee-keepers if they would send them into this department.

Field Notes From Tennessee

J. M. BUCHANAN, Franklin, Tenn.

One hundred colonies were wintered in two-story hives with the excluders removed, and I don't think I ever saw bees breed up faster in the spring. By the last of April some of the hives had as many as 15 frames fairly well filled with brood. There has been plenty of pollen all spring, and good weather during fruit bloom. We usually winter in one story, but last fall there was a heavy aster flow, and this honey not being first class for market, was left on the hives, each colony in the yard having from ten to forty pounds in partly filled frames in the super, in addition to the usual supply in the brood chamber.. The result has been more than satisfactory and I am wondering how much the one-brood chamber man loses, especially if he uses only eight frames. Of course what was left of this dark honey was removed before the white honey flow.

We are not expecting a very heavy flow from clover this season, as much of the clover that would have bloomed this summer was killed by the drouth last year, some localities having none at all left. Black locust is beginning to bloom (May 8th) and bids fair to yield well. There is very little basswood left now, and we don't count much on that. Sourwood will yield well on the uplands, and the cotton bloom will depend on the weather during June and July.

I wonder what the average time is for nailing and wiring frames. It takes about the same time to put in the wires as to nail the frame. Using standard Hoffman frames, and wires four times across, my assistant nailing and I wiring, we have been finishing fifty frames per hour. We have a wiring board with a form for holding the frame, and spools at the ends for the wire to run around; the spool of

wire is fixed to the bench at one side. The wires are stretched tight enough to sing, as they will slacken a little when putting in the foundation.

Our increase is made about swarming time, as brood is plentiful then, and the young colonies have time to build up during the flow. Brood is taken from such colonies as can best spare it and placed over an excluder on a weak colony to ripen for a week, and then three or four frames of this sealed brood, with the bees on it, and a frame of honey, are placed in a new hive and given a ripe queen

cell, or a young queen. Frames of foundation are given later as they are needed. Such colonies may be made later in the season, but they would likely require some feeding, unless there was a Fall flow.

For sticking labels on tin, we use a well boiled flour paste, with a little alum added, say a teaspoonful of alum, powdered, to a pint of paste. The paste should be pretty stiff, just so as to spread evenly with a brush. A few drops of carbolic acid are sometimes added, as this prevents mould, and also keeps mice or roaches from eating the labels.

The Secretary's Corner

GEO. W. WILLIAMS, Red Key, Ind.

Well, it will have to be a rather slim Secretary's Corner this month although there is a wonderful lot to say, but the Secretary is flat on his back and not worth much anyhow.

I will have to go slow and do the best I can. In the last four months I have written hundreds of letters, followed up and analyzed a number of successful campaigns of selling honey, taken the opinion of several of the brightest commission men of my acquaintance, and after careful and mature deliberation, I find that there is but one way of increasing the sales of honey and that is by persistent, efficient personal effort. In making this brief statement, I have compressed in a few brief lines the work of years of painstaking labor, and I do not want to cheapen the effect on the reader by being too crisp, but I am stating exact facts. This is not my opinion, alone, but that of hundreds of the best and brightest minds interested in the honey sales proposition.

The most wonderful aid in selling yet found is a live bee exhibit right along with the honey. It doubles up the sales right along, and can be varied indefinitely. This one feature is the one that will be of more aid than any other, and we must use it in every way we can in connection with our exhibits, make them as attractive as possible

to make them. We small producers must keep in mind that it is our special duty to dispose of our local crops locally, so as not to unduly congest the bigger centers. We have 10,000 bee-keepers who can more or less of them be interested in this work.

It has been decided that a week, preferably shortly after the general flow be devoted to this universal demonstration. Mr. Ernest Root has given me his warmest approval of this plan, and will support it in Gleanings. He believes that the future honey sales will be more or less influenced by these ways.

It looks to me from my bedroom that we were due for the biggest crop of honey in years. At any rate we will surely have enough to make us all study a little as to what the market will be.

In the meantime, your secretary will not try to arrange any special line work for publication, but submit the foregoing brief synopsis for the consideration of the directors. I feel as though we had the tacit approval of the board, but this will give them an opportunity to properly endorse the plan, so I can go ahead next month and make the chips fly every way. I believe we are looking right toward success, and with the united efforts of the journals urging the bee-keepers to concerted action, big results must follow.

The National Bee-Keepers' Association

And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
Amherst, Mass.
 FRANK C. PELLETT, Vice-Pres....
Atlantic, Iowa.
 GEORGE W. WILLIAMS, Sec.-Treas-
 urer.....Redkey, Ind.

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 J. M. BUCHANAN.....Franklin, Tenn.
 WESLEY FOSTER.....Boulder, Colo.
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 E. G. CARR.....New Egypt, N. J.

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
G. M. Frizzell, Temple, Ariz.
 ADIRONDACK—H. E. Gray.....
Fort Edward, N. Y.
 COLORADO—Wesley Foster.....
Boulder, Colo.
 CHICAGO-NORTHWESTERN—L. C.
 Dadant.....Hamilton, Ill.
 HAMPSHIRE—HAMPDEN—FRANKLIN
 Dr. Burton N. Gates.....
Amherst, Mass.
 IDAHO—R. D. Bradshaw Notus, Ida.
 TWIN FALLS—C. H. Stinson.....
Twin Falls, Ida.
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 F. C. Bowman.....Idaho Falls.
 ILLINOIS—Jas. A. Stone.....
Rt. 4, Springfield, Ill.
 INDIANA—Geo. W. Williams.....
Redkey, Ind.
 IOWA—S. W. Snyder Center Point, Ia.
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 MICHIGAN—O. H. Schmidt.....
Rt. 5, Bay City, Mich
 MINNESOTA—Dr. L. D. Leonard....
 515 Syndicate Bldg., Minneapolis, Minn.
 MISSOURI—J. F. Diemer..Liberty, Mo.

NEW JERSEY—E. G. Carr.....
New Egypt N. J.
 N. CALIFORNIA—Alwin P. Heim..
Box 16, Fair Oaks, N. J.
 N. MICHIGAN—Ira D. Bartlett....
East Jordan, Mich
 OHIO—F. R. King.....Coeola, Ohio.
 OREGON—H. Wilson.....Corvallis, Ore.
 THE NEW MEXICO BRANCH—
 Henry C. Barron, Hagerman N. M.
 PENNSYLVANIA—H. C. Klinger....
Liverpool, Pa.
 PUERTO RICO—J. W. Van Leenhoff
 Ponce, Puerto Rico, 11 Marina St.
 SOUTH IDAHO AND EAST OREGON—
 R. D. Bradshaw.....Fayette, Ida.
 TENNESSEE—J. M. Buchanan.....
Franklin, Tenn.
 TEXAS—Willis C. Collier, Box 154..
Goliad, Texas
 VERMONT—P. E. Crane.....
Middlebury, Vt.
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E. J. Winder, Vernal, Utah.
 WASHINGTON—J. B. Ramage.....
Rt. 2, N. Yakima, Wash.
 WISCONSIN—Gus Dittmer.....
Augusta, Wis.
 WORCESTER COUNTY—J. S. Whitte-
 more.....Leicester, Mass.

Field Meeting at Delmar, Iowa, July 7th, at the "Coverdale Farm"

The meeting at Delmar, Ia. will be held July 7th at the Coverdale farm." Mr. Coverdale has become famous as a grower of sweet clover and is considered by many of the agricultural papers as authority on the subject. He will have experimental plots showing what sweet clover will do when handled scientifically.

Mr. Coverdale will deliver an address explaining what sweet clover will do for the farmer and stock grower. Anyone contemplating sowing sweet clover can well afford to make a trip across the state to hear Mr. Coverdale and see his experimental plots as well as his large acreage.

Become a National member.

Mr. C. P. Dadant of Hamilton, Ill., of "Foundation" fame is too well known to need any introduction. Mr. Dadant will deliver an address that will be of much interest. Mr. Dadant has been left to choose his own subject, being a very keen well educated man you may rest assured he will have something to say.

Every bee-keeper of any consequence has heard of Dadant. It is a household word. Who has not heard of "Dadant's Foundation." Every bee-keeper who is within reasonable distance should not fail to hear Mr. Dadant. It will be time well spent.

Mr. Frank C. Pellett of Atlantic, Iowa's State Bee Inspector, will also speak on "Foul Brood Conditions in Ia., Foul Brood Laws, etc." Mr. Pellett is also president of our State association and a live wire. He is

also a lecturer of some note. Pellett isn't very large but you will know he is at the meeting alright. Don't forget the basket dinner. Other subjects will be discussed informally but the three addresses will be well worth your time and

money to attend. Let everybody come whether you are a bee-keeper or not. Let every bee-keeper in the NE $\frac{1}{4}$ boost for the Delmar meeting.

COMMITTEE.

Direct Introduction of Queens

By J. M. BUCHANAN, Franklin, Tenn.

Given at National Convention, St. Louis Feb. 19th, 1914

For many years the bee-keeping world has longed for a safe and sane method of queen introduction. Any method that will come under that description must be easy of application; it must be free from any chance of spreading infection; and it must be reasonably sure in its results. In other words, it must be dependable under any ordinary circumstances encountered in practical bee-keeping.

The method in common use, that is, the "cage and candy" plan, is open to several objections. It is uncertain; the loss of queens when using this plan has been about twenty percent with us. Mr. A. C. Miller puts it at forty percent. At any rate, it is much too high. Next, the plan is unsafe; the country is over-run with foul brood, which is usually transmitted through the medium of honey; and who can tell whether the honey used in the queen-cage is free from infection or not? Then again, this plan is wasteful. The queen is kept caged for two or three days, and sometimes longer, so that there is generally a period of four or more days lost, that should be devoted to egg-laying.

Several plans for direct introducing have been used, with more or less success. We will pass over the so-called "drowning method," and the plan of daubing the queen with honey, or flour, as being neither practical or humane.

I will describe two methods of direct introduction which approximate very nearly to the desired "safe and sane" standard. The

smoke method, as practiced by Mr. Arthur C. Miller, is given as follows:—The colony to receive a queen has the entrance reduced to about a square inch, with anything convenient, then about three puffs of thick white smoke are blown in, and the entrance closed. In from 15 to 20 seconds the colony will be roaring; the small space at the entrance is now opened, the queen is run in, followed by a puff of smoke, and the entrance closed and left so for about ten minutes, when it is reopened and the bees are allowed to ventilate and quiet down. The full entrance is not given for an hour or more.

(Concluded on page 218)

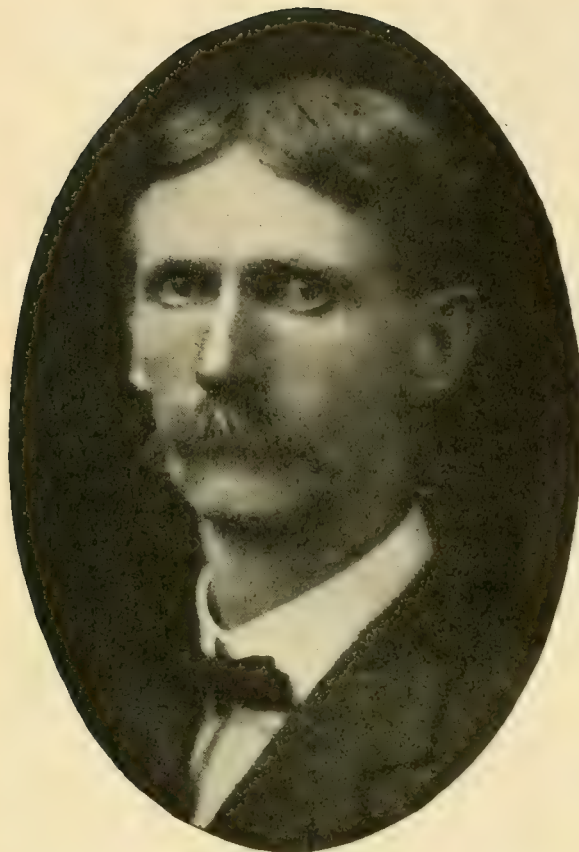
The Summer meeting of the New Jersey Bee-Keepers Association will be held July 8th at the apiary of Robert Spencer, Wharton, Morris Co., N. J.

An interesting program is being prepared. E. G. Carr, Sec.

The Pennsylvania State Bee-Keepers held their 10th annual meeting in the State Capitol, Harrisburg, Feb. 20-21. It was a very lively meeting and from the point of enthusiasm perhaps the best ever held.

Dr. H. A. Surface, State Zoologist, who is the president was in charge of the meeting. The address of welcome was given by Hon. H. B. Critchfield who is the Secretary of Agriculture of Pa.

The subject of Comb and Extracted Honey in the same Apiary was discussed by H. P. Faucett. He runs his yard for both kinds of honey and says that colonies that



DIRECTOR J. M. BUCHANAN,
Franklin, Tenn.
Reelected for one year

sometimes cannot be coaxed into section supers will work in extracting frames.

F. G. Fox spoke on 500 per cent increase and a crop of honey. He demonstrated how it is possible with natural swarming to take the parent colony after the swarm has issued and divide it into nuclei and build these up into full colonies.

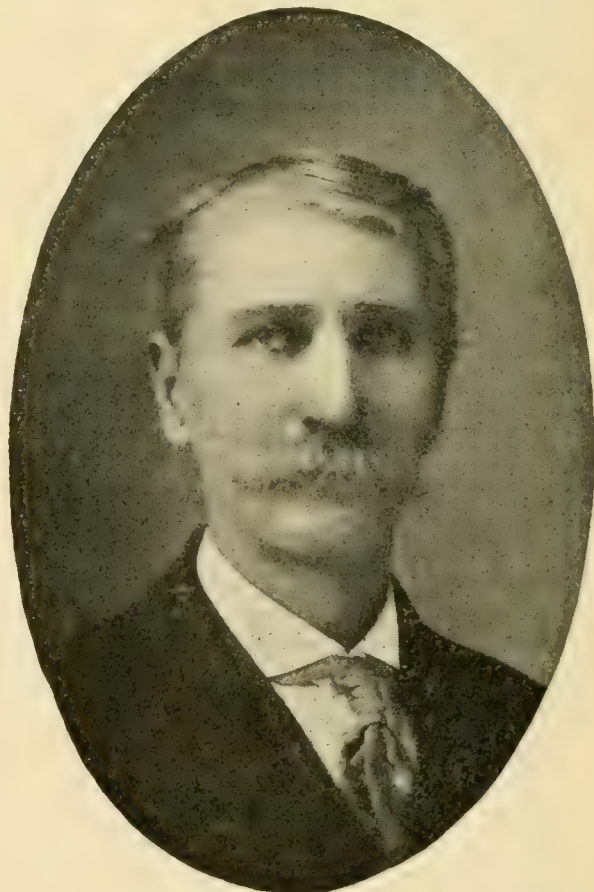
The Foul Brood Inspectors, Geo. H. Rea and Jno. O. Buseman made their reports on inspection. These were quite interesting in facts and exceedingly amusing in the experiences the inspectors had with the different kinds of people they met in their rounds. Inspection is doing a great work for bee-keeping interests simply by the contact of the inspector and the education that is spread over the state in this way. Bees are yet kept in all sorts of ways: logs, bee-gums, straw skeps, soap boxes, and even some have been found in beer kegs.

The Coons Hive and Comb Honey was a demonstration made by R. L. and A. N. Coons of Coudersport.

This is a shallow chamber hive of their own make with which they have been successful. This year's crop was 28,000 pounds of section honey from 400 colonies. These persons, father and son, are the largest producers in the state.

Dr. E. F. Phillips of the University of Philadelphia, who was on his way back from the National convention at St. Louis and who was the delegate of Penna. to the convention gave an address on "Two Essentials in Honey Production." He laid emphasis on having the bees go into winter quarters strong and with plenty of stores so as to have plenty of bees early enough to get the honey flow when it comes. A large number of us have plenty of bees which the main flow is over and when the bees are not needed.

F. J. Stritmatter spoke on House Apiaries. This subject aroused considerable interest as it is quite novel to Penna. people. One of his

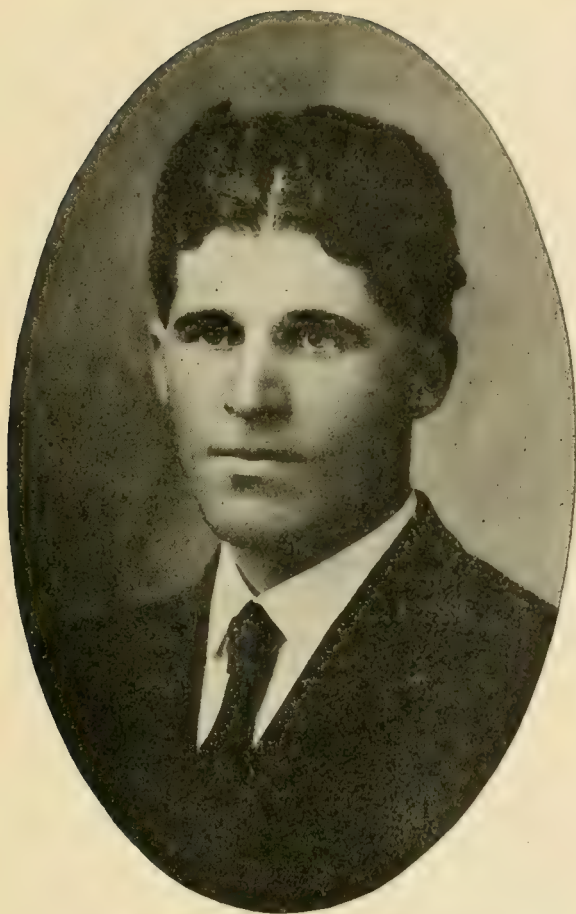


DIRECTOR GEO. W. WILLIAMS,
Redkey, Ind.
Elected for a Full Term of Two
Years

Back Numbers of Review Wanted

The Bureau of Entomology, Washington, D. C. are short the following back numbers of the Review, for completing their files and if any of our readers can spare one each of any of the following list, and will mail them to this office they will be appreciated. The missing numbers are as follows: February, September, October and November, 1908; May and September, 1909; March and November, 1910; January, February, March and November 1911.

We are unable to publish the picture of Director E. G. Carr of New Egypt, N. J. this month on account of the failure of the engraving to arrive before we go to press. This will be published in the July Review.

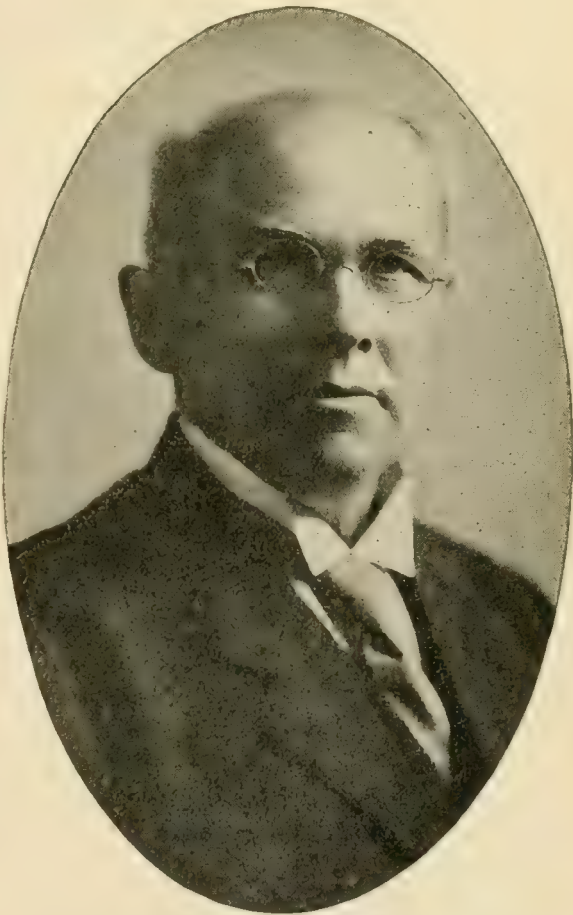


DIRECTOR WESLEY FOSTER
Boulder, Colorado
Holds over one year

buildings is a three-story building 20x30 ft. This contains 86 colonies in hives built solid to the floor of the room. His experience tells him that he has solved to a great extent, the wintering and the swarming problems, by means of the house apiary.

Soil Fertility and Honey Production was the subject of the president's annual address, Dr. Surface told the bee-keepers to increase the fertility of their soils by sowing the legumes: clover, alfalfa, vetches, etc. and by so doing reap another crop, that of the sweet nectar which these secrete.

Dr. H. A. Surface, Harrisburg, was re-elected president, H. C. Klinger, Liverpool, Sec-Treas., Hon. Welmer, Lebanon, 1st Vice Pres.; Mrs. Dr. L. M. Weaver, Philo, 2nd Vice Pres.; and R. F. Coons, Coudersport, 3rd Vice Pres.; H. C. Kler, Liverpool, Pa., Sec'y.



DIRECTOR E. D. TOWNSEND
Northstar, Mich.
Holds over one year

Direct Introduction of Queens

(Continued from page 215)

This plan has had many endorsements during the past season. I have only given it a limited trial, for I think I have something better. This is the so-called "fasting method" which we practice in our own apiaries:—First, we see that the colony is queenless, and if there are queen cells present they are removed. The queen to be introduced is placed in a clean cage, alone, and without food, and kept out of reach of bees for about forty-five minutes. Now move the cover, or super, a little to one side, and blow a light puff or two of smoke in to drive the bees back. Then run the queen in at the opening above the frames and replace the cover. Don't disturb the colony for a day or two. We usually introduce about sundown, as the bees are quieter

at that time.

This method has given uniform success wherever carefully used. Out of three hundred queens introduced by this plan, at all seasons and under varied conditions, we only lost four, and these were in colonies with laying workers.—And I want to say here, that it never pays to try to requeen such a colony.—These queens, of which a record was kept, included virgins, queens from the mails, and queens from other colonies in the yard.

The scent factor, or colony odor, has been much over-rated, and much more seems to depend on the attitude of the queen, than upon the odor. If she is frightened, and runs or squeals, the bees are apt to ball her; but when hungry and lonesome she begs for food, and a begging bee, whether queen or worker, is generally received anywhere.

Developing the Bee-Keeping Industry

By FRANK C. PELLETT, Atlantic, Iowa,

Vice President National Bee-Keepers' Ass'n

(Given at National Convention St. Louis, Feb. 17th, 1914)

It is time for the bee-keepers to set a new standard of values for their own business. We have always been too conservative and too much afraid to assert that bee-keeping is a desirable occupation. Too many are inclined to whine about the danger of encouraging too many beginners who will glut the market with their product. This being the case it is not surprising that the public has come to regard bee keeping as a pleasant occupation for old men who are incapacitated for productive labor, or a healthy diversion for tired business or professional men, or yet a profitable occupation for growing boys with no better thing to occupy themselves. The fact that our business is not regarded as a man's size business is our own fault. The public takes us at our own estimation.

Will you please give me a single reason why honey production should not take rank with any other agricultural occupation? Are not the

bee keepers equal in intelligence or moral standing to men engaged in any other business? There is no reason to be given: Bee keepers rank high in intelligence and morally there is no single class of men that are superior. The business is open to those who have sufficient capital to engage in many lines as well as to those who because of ill health cannot follow a more strenuous calling.

Timid souls are always talking about overstocking the market—the over production of honey. There is a danger of overstocking limited areas of pasture but there is always unoccupied territory where the bee-keeper can find elbow room. As for over production of honey what could be more foolish so long as we are only producing a pound or two of honey per capita annually. Why we can develop our own markets. Single counties can be developed into honey consuming centers that will consume tons and tons of honey. There was much talk about over production of ap-

ples twenty or more years ago. Yet since that time millions of apple trees have been planted and come to bearing yet apples bring better prices in the world's markets than ever before. Why? Because the newspapers have been full of news about apples. There have been apple shows in every city of importance in the apple producing regions and apples are constantly kept before the consuming public. Do you often buy things for your table that are not advertised or otherwise brought to your attention? I think not. The apple men are not afraid to tell what profits they make from their orchards. What if a lot of new orchards are planted? A large portion of them will not be properly cared for to bring them into profitable bearing and the increased publicity will create a market that will more than care for the increased production.

The first thing to undertake is to establish a good organization among bee-keepers of the United States as a whole. Our National Association has but few, if any, more members than some of the State associations. There is no reason apparent why it should not have an active membership of five thousand members. How will we get them? To get them we must offer some inducements for membership, give them something for their money.

When I urge men to join the National they tell me that they get nothing for the dollar but the Review and that they can buy a bigger and better journal privately published for the money. Our Iowa association is but two years of age yet it has more actual accomplishment to its credit than any association twice its age and I believe that none can show better results regardless of age. In about eighteen months the Iowa Association has secured the passage of the desired legislation. Our foul brood laws are good and we have a permanent fund for inspection equal that of most states and better far than all but a very few. We are not compelled to go back to the legislature at the next session and take this matter up again for it is provided for until the legislature shall see fit to repeal the law. The society undertook to get every county fair in

the state to offer a creditable premium list on hive products. Many of the county fairs have already responded by offering from twelve to twenty times as much as they had offered previously. The State fair also increased their premiums forty per cent at the society's solicitation.

The association asked for a course in apiculture at the State college of agriculture and extension lectures on bee-keeping in farmers' institutes and short courses. The extension lecturer was provided almost immediately after the request was made and the course in apiculture is now in course of preparation and will begin at once.

Bee-keepers who were members of the association have been threatened by ordinances of town councils who would compel them to remove beyond the limits of the town. The society has employed an attorney and offers free legal advice to any member of the association on any subject relating to bee keeping.

A series of six bee-keepers' picnics are planned for next summer in different parts of the state in order that the members shall meet in groups between conventions and keep up interest and enthusiasm.

At our next annual convention we expect to hold a combined convention, short course and hive products show. At the conventions the experienced members get a feast but there is not much of value for the beginner. The short course with demonstrations of every phase of practical methods will give the beginner the help he needs. The show with suitable premiums will offer an inducement for every member to bring a sample of his product and compete for a prize. The last feature will enable us to get much valuable publicity.

The question has often been asked, "What shall the National do to be saved?" In my opinion the thing to do is to select some central city for our next convention and to hold a National Hive Products show in connection with it. If properly managed such an institution can be made to mean as much to the bee-keeping fraternity as the International Live Stock show means to the live stock industry. The exhibits should be divided in-

to three divisions; supplies, honey and wax and queens. The society medals of award should mean much judging apiary products. Our Notice if you will what the poultry shows under the auspices of the American Poultry Association mean to the Poultrymen. Why not as much to the bee-keeper?

As yet there is no standard for judging apiary products. Our National Association is of no value to us if it does not stand for something. Every judge is a law unto himself and has no precedent or guide in placing his awards aside from his own judgment. This Association should appoint the most scientific men in its membership to prepare a standard for queens of the various races. They should report only after they have carefully examined hundreds of queens of pure parentage of the various races. This standard should be improved from time to time as its defects become apparent until it reaches as near the ideal as it is possible to attain. The same thing should be done with honey and wax. This will require a large number of samples of the principal kinds of honey and the score card should be prepared with the greatest possible care. The influence of the Association should then be used to make it the standard for judging every exhibit large or small.

We hear much talk about a nation-wide campaign of advertising to increase the consumption of honey. This is manifestly impossible because of the fact that each producer has but a small part of the product to market, and his margin of profit is too small. With the right kind of show as a foundation on which to build, a man who understands the game of publicity, can secure for the bee-keepers of this country advertising from Maine to California and from Canada to the Gulf: Advertising on front page space that could not be bought at all with a cash price and which will bring results that you could not bring for half a million dollars of cash spent in newspaper advertising. The man in charge must understand the needs of the press and know what has a news value. When he gets hold of a good story he must play it up big, weaving in the information that he desires to get

before the public. The newspapers are as anxious to get such material as the Association is to get it into their pages.

Once it becomes apparent that the Association is offering something of value to its members there will be no trouble about membership. It is very important to do something different, something new. The honey day recently proposed in Indiana is alright, but there have been apple days for so long that the public no longer thinks much about such a proposition. However when at the Iowa Association it was proposed to begin a campaign to add honey to every Christmas menu and to provide the honey for the poor who were unable to buy it for themselves, the papers gave it wide notice. The association printed large window cards in two colors with the greetings of the Iowa Association and asking everybody to eat honey with their Christmas dinner. When this has lost its force we will try something else and try something that has not been tried and worn out in other lines.

The cards used by some of the members cost the association more money than the member had paid the society for fees. What of that? The use of these cards boosted everybody's product and we were able to offer the member something worth while as an inducement for affiliating with us. The bee-keepers interests have been kept before the public almost constantly during the past twelve months. The business of honey production has received more publicity from the press of the state in that time than altogether for many years before. This year we produced a record crop and in the fall everybody expected a glutted market, yet at the convention in December most of the members reported their crop sold and largely on local markets. The publicity given the industry during the season kept the honey constantly in the public mind and it sold easier than ever before. All that is necessary to put bee-keepers on the front seat is to wake up, quit whining and get busy.

Be busy as a bee and see if you don't get your share of the sweets of life.

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; sections with more than 60 unsealed patched up sections; sections weight to the box; leaking, injured, or

DENVER, COLO.—We have no more comb honey to offer. Are jobbing extracted honey as follows: White extracted 8c and light amber 7c. We pay 32c per pound cash and 34c in trade for clean yellow wax delivered here.

Colorado Honey Producers' Ass'n.
F. Rauchfuss, Mgr.

May 16

CHICAGO—The volume of trade is very narrow and consists in dealers buying just a little to have it on hand when inquired for. No longer is there a show made of it on the counters etc. as in winter months, all of which is a seasonable condition.

The fancy grades are not plentiful and continue to bring from 14c to 15c per lb. according to the flavor, style and everything else that goes to make a fancy article. Anything off from this grade sells at from 1c to 3c per lb. less with amber grades bringing from 10c to 12c per lb. Extracted is meeting with practically no demand and prices are inclined to be easy, especially is this so aside from fancy clover and

linden, which like the comb, is in better demand and more firmly held.

Beeswax continues to sell upon arrival at from 33c to 35c per lb. according to color and cleanliness.

R. A. BURNETT & CO.,
173 W. South Water St.

May 18.

To Rid Buildings of Rats and Mice

Mix equal parts of dry cornmeal, wheat middling and good Portland cement. Mix thoroughly and add a little sugar and cheese crumbs. Set where they can have full access to it. There is no danger from using it as it contains no poison. It is better than all the cats, dogs, traps and poisons. The rats and mice eat it and go outside for drink. It hardens in their stomachs and kills them.—Green's Fruit Grower.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the bee-keeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

Cash for Members' Beeswax

Members having beeswax that they want to turn into cash, we can advise you where you can get 36c delivered for it. Dealers: Beeswax is very scarce, and if you are in need of wax, and can spring this price any, kindly advise this office, as we can likely turn some wax your way.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Five or six tons of amber and buckwheat extracted honey. HENRY J. ZINN, 1135 Wyo Ave., Forty Fort, Pa.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WRITE US for prices on car lots of Fine Alfalfa Extracted honey to be delivered after July. Address MARTIN BROTHERS, Lander, Wyoming.

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind. tf

WE HAVE a customer who wants a car of Alfalfa honey; mostly extracted. Members having this amount for sale will do well by writing this office, stating quality and lowest price they will sell for.

FOR SALE—Orange honey, new crops fancy quality, both light amber and white. Put up in new 60 lb. cans, 120 bs. net weight to the case. Sample free. Wholesale price \$12.00 per case, f. o. b. Riverside. JAMES MCKEL, Riverside, Calif.

FOR SALE—White Clover Honey, none better. In 10 lb. pails, six in a case, at \$6.50 per case; 5 lb. pail, 12 in a case at \$7.00 per case; 1/2 lb glass jars, 24 in a case, at \$2.80 per case. Sample, 4c. HENRY STEWART, Prophetstown, Ill.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

BEES AND QUEENS

FOR SALE—100 Colonies Bees. Address W. H. STANLEY, Dixon, Ill.

WANTED—30 to 50 free from disease colonies of bees. Address J. A. Pearce, Route No. 1, Grand Rapids, Mich.

WANTED—100 colonies of bees in lots of 25 or more. J. VAN WYNGARDEN, 10829 Wabash ave., Chicago, Ill.

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

FOR SALE—15 colonies Italian bees in Danz hives. Combs drawn on full sheet foundation. Write LEON MORRIS, Elizabethtown, Ind.

GOLDEN ITALIAN QUEENS about June 1st. Tested \$1. Untested 75 cents each; dozen \$7.50. Satisfaction guaranteed. J. I. DANIELSON, Fairfield, Iowa, Route No. 7.

IT IS YOUR RIGHT when buying queens to demand a pedigree. We send a pedigree with each order for queens. BORDER CITY APIARIES 223 N. B. St., Ft. Smith, Ark.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

EXTRA STRONG 1 frame nuclei \$1.75. Add price of queen wanted. Pedigreed Goldens untested, \$1; tested \$1.50. Breeders \$10. Deduct 25c each for 3-band. BORDER CITY APIARIES, 223 N. B. St., Ft. Smith, Ark.

FOR SALE—Untested Italian queens, Howe stock. Guaranteed pure. Select mated, ready about June 15th. Send for circular. Price one 85c six for \$4.50, \$8.00 per dozen. No foulbrood. D. G. Little, Hartley, Iowa.

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c. E. E. MOTT, Glenwood, Mich.

FOR SALE—Three Banded Italian Queens, bred from the best honey gathering strains that are also hardy and gentle. Untested queens 75c; six \$4.25; 12, \$8.00; tested \$1.25; six \$7.00; 12, \$12.00. For select queens add 25c each to above prices. Breeding queens \$3.00 to \$5.00 each. For queens in larger quantities write for prices. ROBT. B. SPICER, Wharton, N. J.

**LEWIS HIVES ARE BUILT LIKE FURNITURE
ARE PERFECT IN ALL RESPECTS**

Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

FOR SALE—One to 100 colonies bees in 10-frame hives. Any quantity to suit the purchaser. Address L. E. Evans, Onsted, Mich.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on nuclei for May delivery. We have Moore's strain of Leather colored Italians. OGDEN BEE AND HONEY CO., Ogden, Utah.

FOR SALE—Three-banded and Golden Italian queens and bees that are gentle, prolific and the best of honey getters. Also bees by the pound and half pound, and nuclei. Circular on request. L. & H. APIARIES, Clarkston, Mich.

QUEENS by return mail or your money back. Guaranteed purely mated. J. E. H. and Strain of Three Band Italians. Write for price list and free booklet, "How to Transfer. Get Honey and Increase." J. M. GINGERICH, Arthur, Ill.

PURE ITALIAN QUEENS. June to October, mothers chosen from 150 colonies whose bees are most noted for purity, gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute. more 50 cents each. J. H. HAUGHEY, Berrien Springs Mich.

TRY MURRY'S strain of 3-banded Italians. No better honey gatherers anywhere. Queens reared by latest scientific methods. Eighteen years' experience in queen-breeding. Prices: Tested, \$1.00 each; Untested, 75 cents each. Reduced prices after May 10th. Also bees by the pound after that date. H. D. MURRY, Queen-breeder, Mathis, Texas.

QUEENS bred from Doolittle's best stock untested 60c each, \$6.60 per doz., \$59 per 100. Same stock of one-year-old queens removed from our colonies to prevent swarming, 50c each, \$5.40 per doz., \$49 per 100. Delivery guaranteed. Nuclei, 2-frame, \$1.50; 3-frame, \$2.00. Add price of above queens wanted. We have a rare bargain of an apiary of several hundred colonies of bees for sale on easy terms. Particulars on request. SPENCER APIARIES CO., Nordhoff, Cal.

MISCELLANEOUS

FOR SALE—Motor Cycle, Telephones. Address F. PRESSLER, 1726 Armitage Ave., Chicago, Ill.

HONEY LABELS—Catalogue and prices free for the asking. PEARL CO., Clintonville, Ct.

FOR SALE—Bee-Keepers' supplies, honey and bees. Write for price circular. A. E. BURDICK, Sunnyside, Wash.

YOUR NAME AND ADDRESS on 100 envelopes 30c; on 100 sheets writing paper 30c. All postpaid. PEARL CO., Clintonville, Conn.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR EXCHANGE FOR QUEENS, or sell, 50 Alexander feeders, best make. Address F. D. Stephens, Box 383, West Branch, Mich.

FOR SALE—100 Heddon hives and fixtures to run a 100 colony apiary. Bargain to clear out. Address MRS. R. L. GRAY, Lapeer, Mich., R. F. D. 4, Tel. 246—R 11.

FOR SALE—Flemish Giants Rabbits, \$3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats, 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

WANTED—Reliable man of good habits to work with bees. State wages, age and experience first letter. The Rocky Mountain Bee Co., Forsyth, Montana.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson, Mich.

FOR SALE—Eight Little Wonder Bingham smokers at a closing out price of only 40c each, or two for 75c. Add postage for 2 pounds to go by mail. Address Mrs. W. Z. HUTCHINSON, Flint, Mich.

WANTED—By a lady with college training as a bee-keeper, but without practical experience, a position with some practical bee-keeper during this season as a student. For further particulars address Lady Bee-keeper, Care The Bee-Keepers' Review, Northstar, Mich.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers, have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

You are invited to become a National member.

THE BEEWARE BRAND MEANS SUCCESS

INSURANCE

Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

FOR SALE—Two dozen mailing cases, bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address **THE BEE-KEEPERS' REVIEW**, Northstar, Mich'gan.

Carniolans are excellent winterers, build up rapidly in the spring, are very prolific, cap their combs very white, enter supers readily, and keep their colonies strong at all times. Write for our FREE paper "Superiority of the Carniolan Bee," explaining more fully, giving briefly best systems of management. Untested queens, \$1.00 each; doz. \$9.00. 1 lb. package of bees without queen \$1.50, with queen \$2.50 in June.

Carniolan Queen-Breeder

HONEY

Finest White Clover Extracted Honey, in 10-pound friction top pails, 6 pails in a wooden shipping case, at only \$6.50 per case. Same, Amber at \$5.00 per case. All f. o. b. Kinde. Address

Woodhull Honey Co., Kinde, Mich.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties.

\$1.00

THE LANDSCAPE GARDEN CO.,
Newburgh, N. Y.

ITALIAN QUEENS

Beginner's outfits and other supplies. Send for list. Address

ALISO APIARY CO.,
Glendale, California

HONEY COMB AND EXTRACTED

We can furnish both comb and extracted honey to bee-keepers who have run out of their own product. All our honey is strictly first class. Italian Bees and Queens in season. Write for prices.

LATSHAW HONEY CO.
Carlisle, Indiana

Address of All Inspectors of Apiaries Wanted

This office frequently has calls for the address of some particular Inspector and to be prepared to furnish this list, we will ask all to send in their address and when they are received, we will publish the list for the benefit of all.

The Bee-Keepers' Review—I am enclosing you a check for one dollar and fifty cents. I want you to send me one of those cuts, "Eat More Honey," and the other dollar is to be applied onto the Review debt. I don't see how a man that will keep bees and subscribe to a journal will not be willing to give you at least one dollar on the debt. If he is an up-to-date bee-keeper and reads the journal he can't look anyone in the eye and say that he will not get at least something that will be worth at least a dollar out of his journal in a year. I know for I have yet to read a journal and see that I don't get at least enough out of it to pay me many times. Here is hoping that you will speedily get out of debt. If you are cramped real bad don't hesitate to call on me again and I will be willing to give you more, as I would pay \$10.00 to finish reading the story that Mr. Wilder is running in the Review. The subscribers to the Review, those that keep bees for pleasure as well as profit, should be ashamed to let the others know that they were not willing to give at least 50 cents.

I am yours respt,

JOSEPH S. SCOTT.

Tell your friends that they can now get the REVIEW for the balance of 1914 beginning with the May number for only 50c.

Now is the time to secure that new subscriber for the REVIEW that you have been thinking of getting. The balance of the year beginning with this number for only 50.

GET TOP NOTCH PRICES BY USING LEWIS SECTIONS AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

The Temperature of the Honey-Bee Cluster in Winter

(Continued from page 204)

normal temperature and the temperatures incident to various activities one can tell the shape, location, and various activities of the cluster by a study of the temperature of different points within the hive and can, in fact, form an opinion as to the welfare of the colony. It has therefore been possible to follow closely the activities of each cluster without opening the hives and even without going near them.

(Continued in July Number)

Review for the Review

(Continued from page 206)

and took them to the shed and deposited them with any lost bees that had remained in them and as you see the next morning before they could get out they will have to go down through this big hive and surely will be told by their sisters where they are at. By changing these bodies and these bees all from the single to the double plan, will prevent the natural swarming with all its trouble and annoyance for this busy farmer and if increase is desired when the honey comes off these big hives with their seething mass of bees can be set apart and a new queen be given to the queenless part and another body placed on each. If no increase is desired, you simply put on your honey cases in the spring and take off your honey when it is ripe from year to year. This is the story of changing from the old to the new method which saves us so much time and annoyance by preventing natural swarming and enables us to make our increase in so much easier and cheaper ways, when we determine or have none at all, if we so desire and makes possible so many other things of value that we have not the time or space to mention here.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one, \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame \$3.50; six two-frame, \$20.00; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

See California

and her two great Expositions FOR ONE DOLLAR

California will hold next year two great universal Expositions, one at San Francisco and the other at San Diego, in celebration of the completion of the Panama Canal and the joining of the Atlantic and Pacific Oceans.

To supply the demand for reliable and authentic information on California and these two Expositions, we have published two guide books; one on San Francisco, the Exposition and Northern California; the other on Los Angeles, San Diego, the Exposition and Southern California, also a lithographed view of San Francisco in colors (size 30x45 inches) a picture of the rebuilt city, including the Exposition. Each book is 6x9 inches, contains 150 pages and beautiful illustrations.

These two books and view give a comprehensive, honest history and description of the State, her principal cities, resources and her two great Expositions. Sent postpaid for a one dollar bill, money order, draft or check. North American Press Association, 1478 Hearst Building, San Francisco.

Field Notes From Michigan

(Continued from page 211)

for the disease, will be careful in some points, and yet allow honey from the disease infected combs to be scattered around on the ground, in this way they may expose many healthy colonies. Always shake the bees on paper in front of hive and burn paper after treatment.

There is no reason why the bee-keeper should find foul-brood harder to exterminate than the doctor does small pox and other similar diseases. Everything depends upon the intelligence and care pursued by the bee-keeper.

The following few pointers may be useful in aiding the bee-keeper to find foul-brood sooner than he might otherwise do:

Weak colonies should be examined and if possible the cause of their weakness located. Another way of putting the foregoing is: If your colonies are not doing well, examine them. While disease may not be present there is usually something wrong, and weak colonies are not profitable and should not be tolerated.

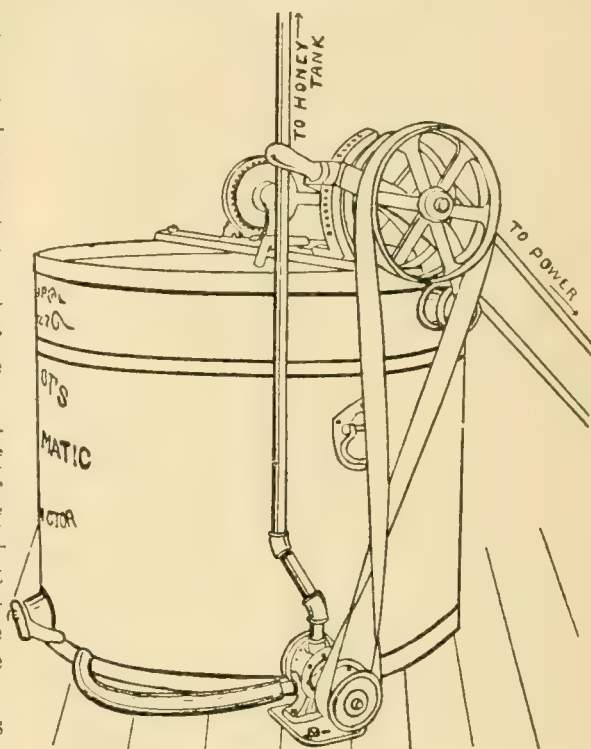
The presence of wax moths (millers) should always be looked upon with suspicion. Wax moths cannot cause disease, directly, their presence in any numbers denotes something wrong; it may be disease, queenlessness or weak or dead colonies. A personal examination will answer the question.

Bee-keepers waste an enormous amount of beeswax in the shape of old combs, and at the same time when combs are left exposed, open the way for the spread of disease. Render your old combs as soon as possible, and in the mean time keep them under cover so that bees and wax moths can not gain access to them. The average hive contains about two pounds of beeswax, and beeswax is valuable.

Now is the time to secure that new subscriber for the REVIEW that you have been thinking of getting. The balance of the year beginning with this number for only 50c.

Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP** then run them with a **NATIONAL 1½ H. P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and every-



Root Automatic Extractor, showing Honey Pump in Position

thing necessary pertaining to the outfit, at \$84.00.

Six-frame extractor outfit as above at \$92.00. Eight-frame extractor outfit as above at \$99.00. Without honey pump, deduct \$17.50. The engine shipped from Wisconsin and the balance of the outfit from Medina, Ohio. The National will take the money you hand us and buy the above outfit. **Directly from the manufacturer, at our one small profit system, on the co-operative plan. Address with remittance.**

**National Bee-Keepers'
Association**

Northstar, Michigan

Well Known Bee-Keeper Dies in Traverse City

Traverse City, Mich., May 9.—Charles Irish, 74 years old, died here this morning after a year's illness. He was one of the best known bee keepers in this section of the state. He came to Leelanaw county from Columbia county, N. Y., in 1865, and 20 years ago he moved to this city and has handled bee supplies during that time.

Notice to Secretaries

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we were very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	113
Gus Dittmer, Wisconsin.....	19
E. R. King, Ohio.....	17
P. E. Crane, Vermont.....	16
E. J. Winder, Utah.....	14
H. E. Gray, New York.....	13
E. G. Carr, New Jersey.....	12
J. S. Whittemore, Massachusetts.....	12
Dr. L. D. Leonard, Minnesota	11
S. W. Snyder, Iowa.....	11
Geo. W. Williams, Indiana....	9
Henry C. Barron, New Mexico	8
J. W. VanLeenhoff, Puerto Rico.....	7
O. H. Schmidt, Michigan.....	3
C. H. Stinson, Idaho.....	4
J. F. Diemer, Missouri.....	2
H. Wilson, Oregon.....	2
Alwin P. Heeim, California....	2
F. C. Bowman, Idaho.....	2
Willis C. Collier, Texas.....	1
B. N. Gates, Massachusetts...	1
L. C. Dadant, Chicago, Northwestern.....	1

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Shipping Cases, Extractors,
Hives, Etc. Everything for
the Bee-Keeper

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red Catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

PAGE-KENKEL MFG. CO.

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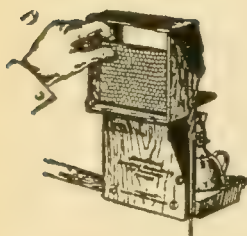
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**"NONE BETTER"
Bee-Keepers'
Supplies**

Perfect sections from young, white, basswood. White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

Guarantee:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

Page-Kenkel Mfg. Co.
New London, Wis.



SPEND LESS TIME IN YOUR OFFICE

and more with your bees by using the new Rauchfuss Combined Section Press and Foundation Fastener. Guaranteed to give satisfaction or your money back. Price, complete with lamp and treadle, delivered by parcel post \$3.00, cash with order. Write today for illustrated circular to

THE COLORADO HONEY PRODUCERS' ASSOCIATION
1440 Market Street, Denver, Colorado.

Bee-Keepers' Supplies and Fruit Packages

We manufacture the famous Sheboygan hive, which always gives absolute satisfaction. Our perfect sections made from selected white basswood, are recognized as the best on the market.

Catalog now ready for distribution. Write for copy.

Sheboygan Fruit Box Company
Sheboygan, Wisconsin

Celebrated Queens Direct From ITALY

Bees more beautiful, more gentle, more industrious
The best honey-gatherers.

PRIZES:

Sixth Swiss Agricultural Exposition, Berne, 1895.
Swiss National Exposition, Geneva, 1896.
Bee-Keeping Exhibition, Liege, Belgium, 1896.
Bee-Keeping Exhibition, Frankfort O. M. (Germany).
Convention of the German, Austrian and Hungarian Bee-Keepers, August 1907.
Universal Exposition, St. Louis, Mo., U. S. A., 1904 The HIGHEST AWARD.
Extra Breeding Queens, selected, \$2.00; Fertilized, \$1.50. Lower prices per dozen, or for more Queens. Safe arrival guaranteed. Write.

ANTHONY BIAGGI

Member of the National Bee-Keeper's Association
PEDEVILLA, NEAR BELLINZONA, ITALIAN SWITZERLAND.
This country, politically, Switzerland Republic, lies geographically in Italy, and possesses the best kind of bees known.
Mention in writing "THE BEE-KEEPERS' REVIEW."

HOW DO THE
BUSY

"NUTMEG" BEES

*By gathering the choicest sweets
in buckets from the flowers.*

*Improve the
"Shining"
OURS*

Leather, colored, red-clover strain. Up-to-date methods. Return mail. June 1, Untested \$1. Doz. \$10. Tested \$1.50. Write for prices by the hundred.

A.W. YATES, 3 Chapman St. HARTFORD, CONN.

Do you know
**The Youth's
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 as it is to-day?



Improved and broadened in its scope. Enlarged by the addition of a Special Family Page, Boys' Page, Girls' Page and Chil-

dren's Page. Great serial stories, 250 short stories. A remarkable Editorial Page. Current Events and Science. A wealth of variety and quality, and all of it *the best*.

FREE TO JAN. 1914

Cut this out and send it with \$2.00 for The Companion for 1914, and we will send FREE all the issues for the remaining weeks of 1913 and The Youth's Companion Practical Home Calendar for 1914.

THE YOUTH'S COMPANION, BOSTON, MASS.

Illustrated Announcement for 1914 free on request.

Remember — 52 Times a Year, Not 12

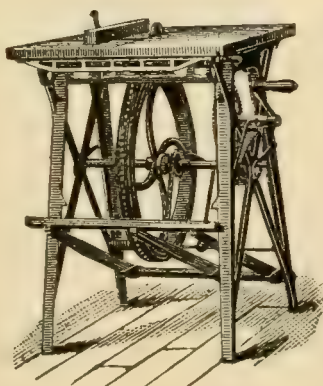
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We do not know of any Family Weekly that we can more heartily recommend to our readers than The Youth's Companion. It gives us pleasure, therefore, to announce that we have arranged with the publishers to make the following offer.

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Regular	\$1	Both Papers Together 1 Year for	\$2.50
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MAKE YOUR OWN HIVES

Bee-Keepers will save money by using our FOOT POWER

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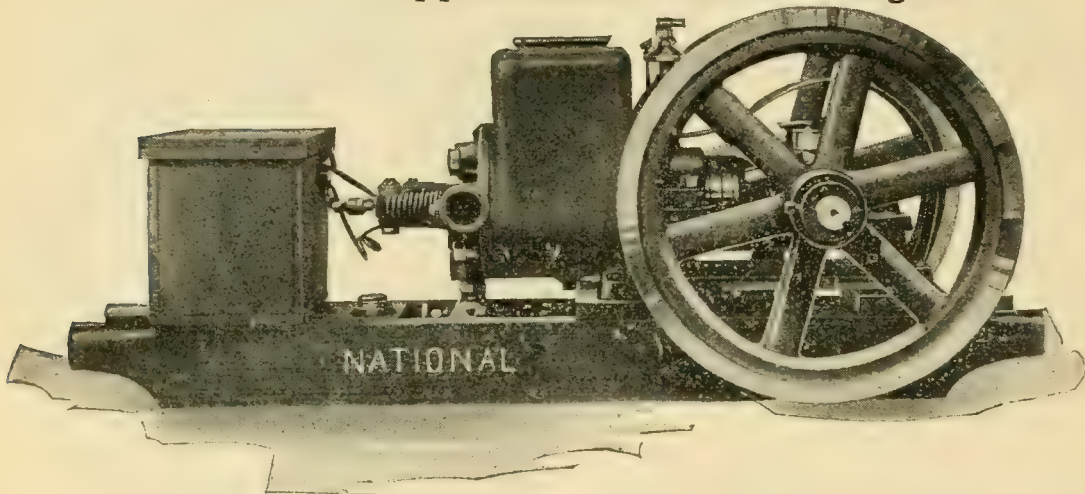
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 SEND FOR CATALOGUE.

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384 RUBY STREET

ROCKFORD, ILLINOIS

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, $1\frac{1}{2}$; bore, $3\frac{3}{4}$; stroke, $4\frac{1}{2}$; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, $1\frac{1}{4}$; floor space, 9x36; shipping weight 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n., Northstar, Michigan.



Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," or cut without reading for their letter heads, envelopes or circulars can be furnished with them for 50c each, postpaid. Address

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

BE A HARD BUYER

BUY YOUR COMB FOUNDATION THE CHEAPER WAY

THE CHEAPER WAY---Ship your Beeswax to Gus Dittmer Company and have it made into any grade of DITTMER FOUNDATION you need.

Write for information before you sell your Beeswax.

Beeswax taken in payment for making your wax into DITTMER COMB FOUNDATION.

Ask for the new 1914 catalogue

GUS DITTMER COMPANY

Augusta, Wisconsin

SEND FOR OUR PRICES ON

BEESWAX

We are paying higher prices than ever before at this Season. WHY? Because of the tremendous demand for

Dadant's Foundation

Write at once. We will quote prices F. O. B. here or F. O. B. your station

DADANT & SONS

Hamilton, Ill.

"NONE BETTER"**"NONE BETTER"****WESTERN DEALERS, ATTENTION****This message is to you, the large users of Double-Tier Shipping Cases**

We make the best shipping case on the market and specialize on the double-tier for the Western trade. Tell us your needs and let us send you sample of a perfect shipping case and surprise you with our prices.

PAGE-KENKEL MFG. CO.

**Manufacturers "NONE-BETTER" Bee-Keepers' Supplies
New London, Wisconsin**

Under date of Feb. 12, Page-Kenkel Mfg. Co. write the REVIEW office in part as follows:

We really have an excellent stock for double-tier shipping cases and sections. We know that we have the best on the market and furthermore our prices are right as you will note from the enclosed jobbers' list, the prices that we make to car load buyers. We are right in the heart of the Basswood district and we have our buyer out looking for timber all the time. Naturally we pick up small lots in different places and we certainly get some excellent timber. We know that if we can break in on that western trade no one will get it away from us. Right now is the time that we ought to be making these double-tier cases, and while several of those large western dealers are dickering with us we haven't as yet closed with any.

We guarantee our goods absolutely and agree to refund any money and transportation charges to any customer who is dissatisfied for any reason whatsoever. We really do not know how to make our guarantee any stronger.

"NONE BETTER"**"NONE BETTER"**

30 DISTRIBUTING HOUSES FOR LEWIS BEEWARE

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

"Griggs Saves You Freight"**TOLEDO****"Griggs Saves You Freight"**

With four carloads of new goods on hand, we are now better prepared for the rush than ever. But don't wait to be in the RUSH. Send your order in now and have the goods on hand ready for use.

NEW ILLUSTRATED CATALOG OF 60 PAGES

We want one in every bee-keepers' hands. Send postal for one today. It is free.

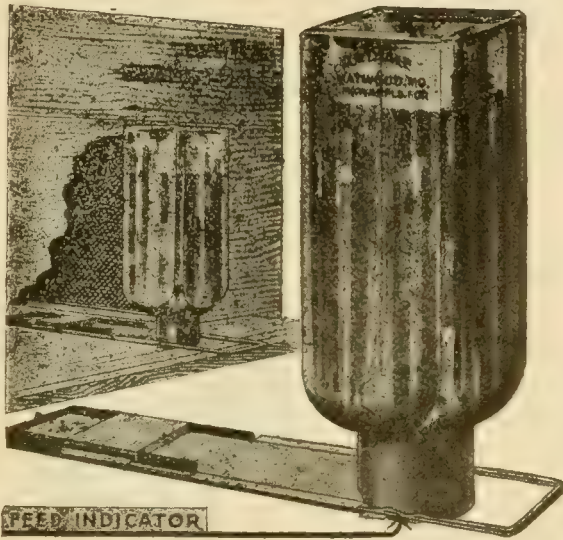
White Clover Extracted Honey Wanted, also Beeswax in exchange for supplies. It will be to your INTEREST to get in touch and keep in touch with us.

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Thale's Regulative Vacuum Bee Feeder, pleases everywhere, not a dissatisfied customer. Let me double your honey crop by stimulative feeding. Most practical method known. Send 55 cents in stamps to-day for a sample feeder.

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H. H. Thale, Maywood, Mo.,

Dear Sir:—Your feeders work perfect. They are better than any feeders I have ever used. I am using them side by side with other feeders and I like yours the best.

Yours truly,

J. A. McCOWAN.

St. Anne, Ill., Apr. 14, 1914.

St. Anne, Ill., Apr. 14, 1914
H. H. Thale:

Dear Sir:—Please send me five more feeders with bottles. I am well pleased with the ten I got some time ago. I don't think that any one will be sorry of their investment, as they are the best feeders I have ever used and I have tried all of them.

Yours truly,

C. W. DYON.

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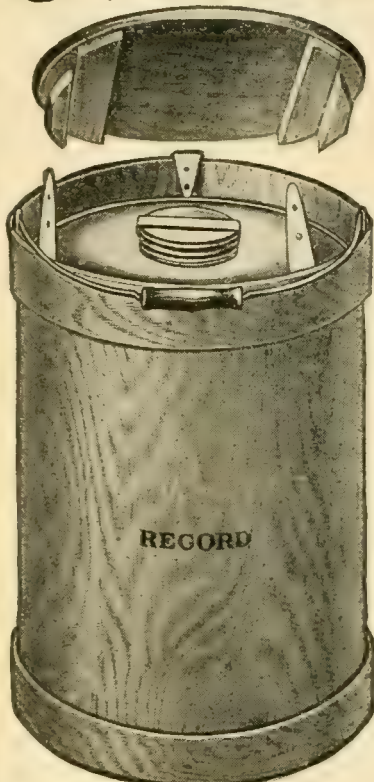
Sample Feeder, with 2 bottles complete postpaid.....	\$.55
10 Feeders complete with 1 bottle for each feeder.....	3 00
25 Feeders complete with 1 bottle for each feeder.....	7 50
50 Feeders complete with 1 bottle for each feeder....	15 00
Extra bottles with cork valve each.....	10

H. H. THALE, Inventor and Manufacturer

Box R 25, Maywood, Mo.

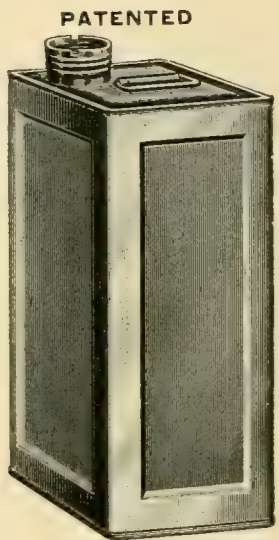
Eastern Buyers Send Orders to Earl M. Nichols, Lyonsville, Mass.; B. H. Masters, Edison, Ohio and Harry W. Martin, New Holland, Pa. Northern Buyers Send Orders to Minnesota Bee Supply Co., Minneapolis, Minn.

CANCO HONEY CANS



AND
PAILS

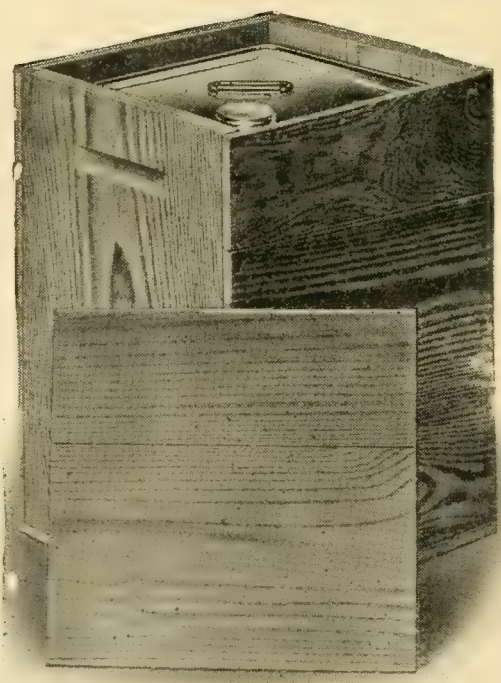
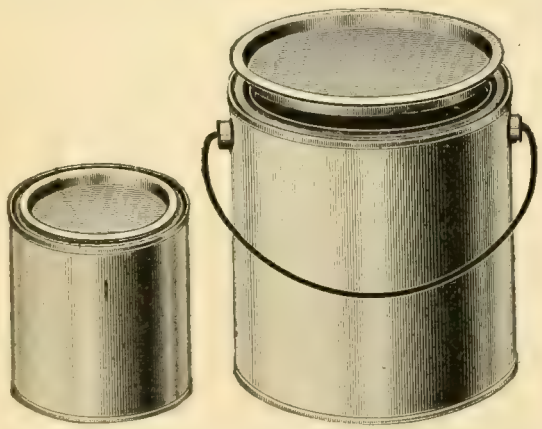
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SQUARE
CRATED
OR
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SQUARE
1 gallon, 100 to
crate \$7.25 per 100

**60-POUND ROUND JACKETED,
3-INCH SCREW**

Price in lots of 25 39 cents each
Price in lots of 100 36½ cents each
Price in lots of 250 36 cents each
**SPENCER FRICTION TOP CANS
PATENTED**



Approx Capacity	Per 100 In 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	..	\$2.25	\$2.15	\$20.00
2½ lb. Can	..	2.75	2.60	24.00
3 lb. Can	..	3.00	2.85	28.00
5 lb. Pail	\$5.	4.75	4.50	42.50
10 lb. Pail	7.	6.50	6.25	60.00

60-POUND SQUARE

One in a case, Price 32c per case
Two in a case, Price 60c per case

Special prices quoted for carload quantities

American Can Co.

New York Chicago
147 West 14th St. Monroe Building

Working Beeswax

In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500Lbs.	300Lbs.	100Lbs.	50 Lbs.	25 Lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.

Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Members kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "National" also, put your mark on the packages so your wax can be recognized and mail the bill of lading also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Ffg. Co., Falconer, N. Y.; Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE NATIONAL BEE-KEEPERS' ASSOCIATION
NORTHSTAR, MICHIGAN

Pack your wax in double sacks. Use no paper or other packing.

Friction Top Honey Pails and Cans



The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx. Capacity		Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2	lb. Can.....		\$2.25	\$2.15	\$20.00
2 ½	lb. Can.....		2.75	2.60	24.00
3	lb. Can.....		3.00	2.85	28.00
5	lb. Pail.....	\$5.00	4.75	4.50	42.50
6	lb. Pail.....	5.25	5.00	4.75	45.00
10	lb. Pail.....	7.00	6.50	6.25	60.00
12	lb. Pail.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2 ½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

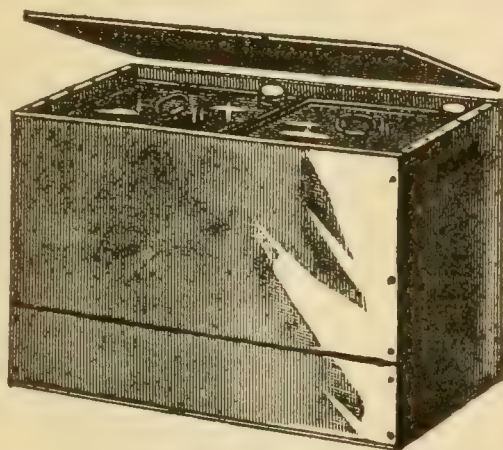
Address all orders to

The National Bee-Keepers' Association
Northstar, Michigan

Tin Honey Containers of Quality for National Members

Of standard size and guaranteed to be the best to be had at any price.

Specifications of the 60-lb. Can



Five-gallon Square, Round-Cornered Cans, 9 3-8 inches square by 13 7-8 inches high, with wide handle, paneled sides and 1 3-4 Cork-lined Screw cap.

Above cans crated 50 cans in a crate **20c** each.

Above cans cased singly with case having 7-8 inch ends and 3-8 inch sides, tops and bottoms, **33c** each.

Above cans cased in pairs with case having 7-8 inch ends and 3-8 inch sides, tops and bottoms **60c** each.

Above cans cased in pairs as above in lots of 250 or more cases, **\$59** per 100 cases.

Above Cans in lots of 500 cases, **\$58.50** per 100 cases.

The above 5-gallon cans with 8-inch screw cap, add 11c per case of two cans. Add 5c for cans cased singly, if wanted with 8-inch screw cap.

One gallon square round-cornered flat top syrup cans, with screw caps. The finest can in the world to sell honey direct to the consumer in, and we have had the manufacturers make us some wooden re-shipping cases, the same as those on the regular 60 lb. honey cans, so they will go by freight the same as the larger cans.

Above gallon cans in wooden case, 6 cans in a case, **60c** per case.

10 Cans in a case, **95c** per case.

We quote them in crates of 50, at \$7.00 per 100 cans.

60-Pound Round Jacketed Shipping Can with 3-inch Screw

Record "Special" Can

Can made with raised top and 3-inch screw in center, which drains entire contents. Wire bail with bailwood is attached to the can.

Can is encased in a wood jacket and is removable to liquify the honey.

Jacket is made with 1-4 veneer in top and bottom to conform to Western and Southern classifications.

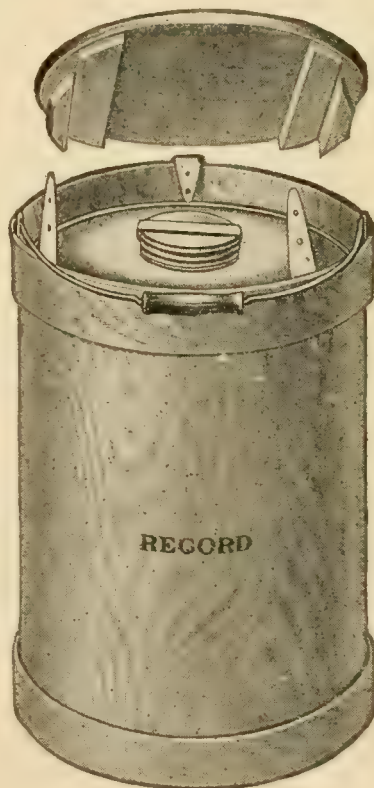
Price in lots of 2539 cents each

Price in lots of 100.....36½ cents each

Price in lots of 250.....36 cents each

Address all orders to

National Bee-Keepers' Association
NORTHSTAR :: MICHIGAN



Gleanings in Bee Culture

FOR 1914

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake bee-keeper whether he has but one colony, a small suburban apiary, or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT—

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES—

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance, and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies, and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET

REPORTS—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1 — WINTERING—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14, which experiments will be published in this number. We shall also give our own experience summed up as to feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you cannot afford to miss such a wealth of information as the subscription price, \$1.00 will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly

JULY
1914



NORTHSTAR,
MICHIGAN



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the Bee-Keeper**

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"Falcon" supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red Catalog, which will be sent postpaid.

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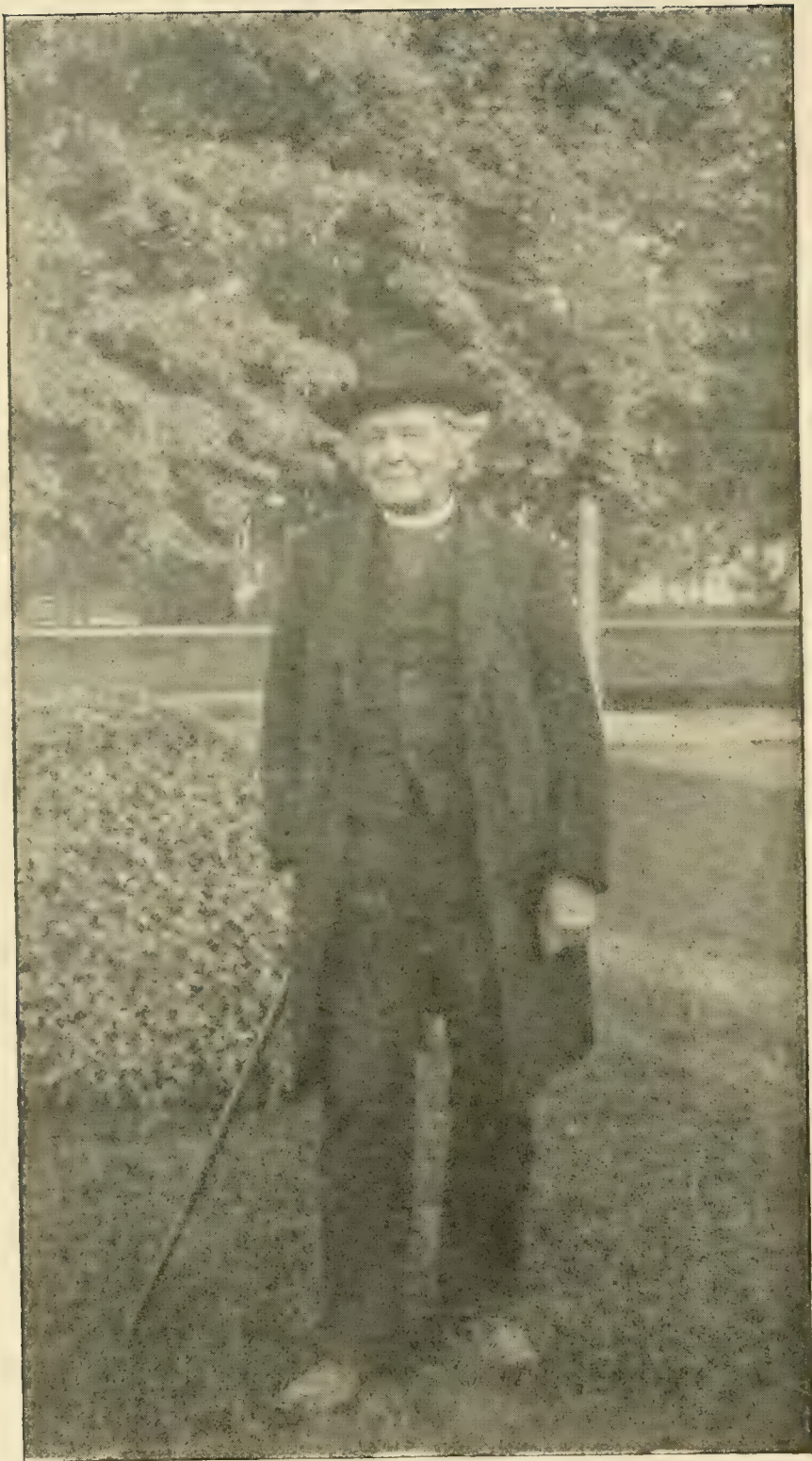
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We make a specialty of manufacturing Best Sections. They are the FINEST in the land, none better. When you once buy Lotz Sections you will want no other. Now is the time to buy and have them when the honey flow is on. Prompt shipments. Our bee supply catalogues for the asking.

Aug. Lotz & Co.
Boyd, Wis.



REV. L. L. LANGSTROTH

Whose work, "The Hive and the Honey-Bee," published in 1853, has just been reprinted.

The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo. PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9 1913, at the postoffice at Northstar, Michigan, under the Act of March 3, 1879.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII

NORTHSTAR, MICHIGAN, JULY 1, 1914

No. 7

The Temperature of the Honey-Bee Cluster in Winter

By E. F. PHILLIPS, Ph. D.,

*In Charge of Bee Culture Investigations, and George S. Demuth
Apicultural Assistant.*

The Influence of External Temperature on Heat Production.

(Continued from last month)

The colony (A) to be discussed under this heading was wintered out of doors (1912-13) on the roof, where the bees were free to fly whenever the weather permitted. It was in a 10-frame Langstroth hive, with the entrance reduced to $\frac{3}{8}$ inch deep and 8 inches wide, and was not packed or given additional protection. This hive contained 19 of the electrical thermometers—12 among the combs, 4 in the corners of the hive, and 3 on the bottom board. Readings were made hourly from 9 a. m. to

4 p. m. through the winter (Sept. 26 to Mar. 28), except Sundays and holidays, and at intervals additional readings were made every 15 minutes (or sometimes every 30 minutes) during the night (5 p. m. to 8:45 a. m.) for periods of several days each. In all 41,413 temperature records were made for colony A.

The reaction of the cluster in heat production, as induced by changes in external temperature is well shown by the records made from noon November 13 to 2 p. m., November 15 (1912), when readings were made hourly from 9 a. m. to 4 p. m. and every 15 minutes at night. From noon on November 13 the outside temperature dropped slowly until 6 a. m., November 15, and the weather was cloudy, so that the bees did not fly. It will

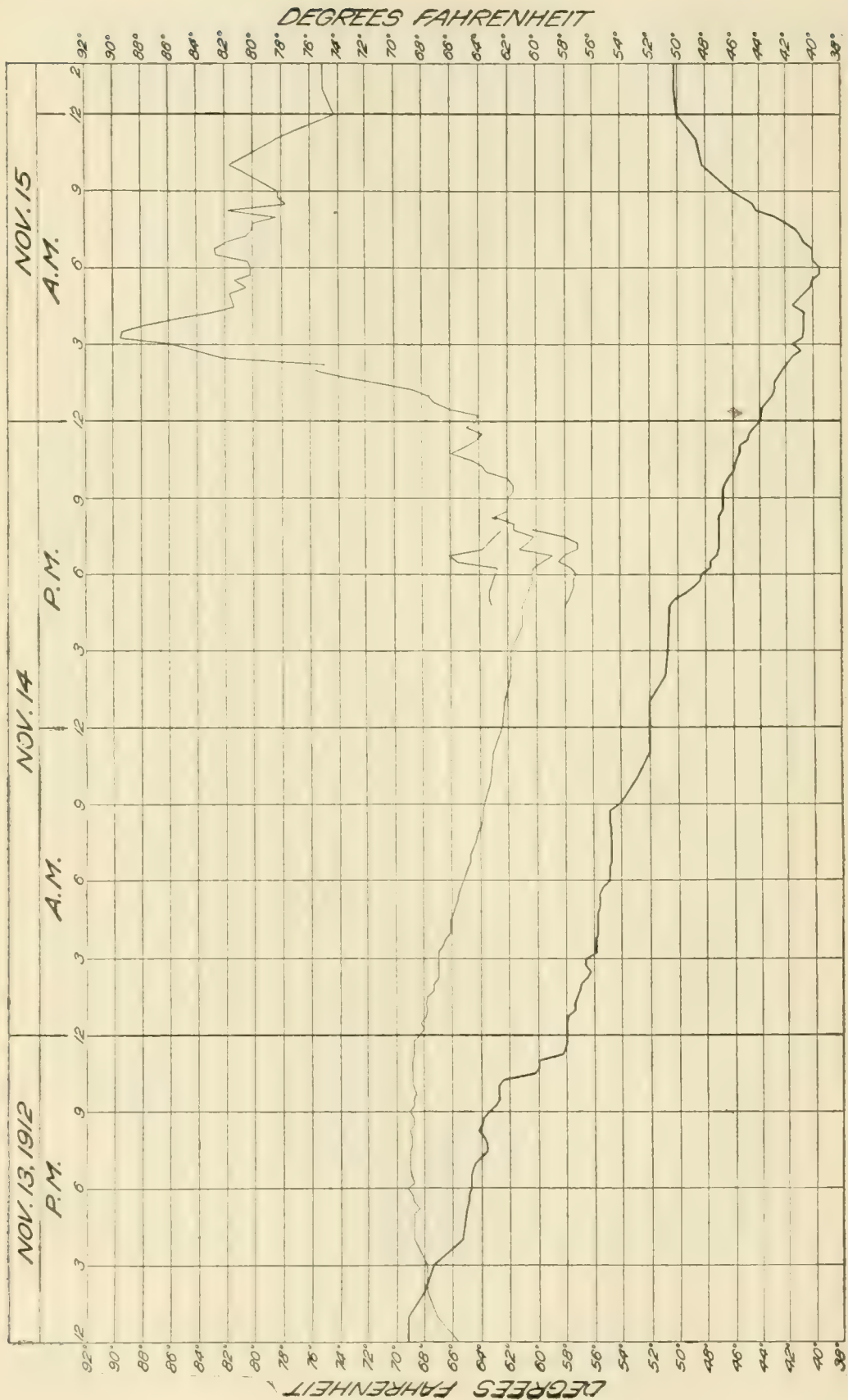


FIG. 1.—The outdoor temperature and temperature of the center of the cluster of bees in colony A from noon Nov. 13 to 2 p. m. Nov. 15, 1912. Outdoor temperatures are indicated by the heavy line. Short lines show temperatures of couples on the outer edge of the cluster at the time of first heat production.

be seen from the accompanying (fig. 1) that at noon on the 13th the outside temperature was about 69.2° F. and all the points within the hive were then cooler than the outside air, due to the fact that it took some time for the inside of the hive to warm up. At 4 p. m. the outside temperature had dropped to 65.3° F., when it was lower than any of the points within the cluster, which had in the meantime become warmer. From this time until 6 p. m. the next day (14th) the temperature within the cluster gradually dropped as the outer air cooled, until the lowest one (No. 9) was 57° F. (Outside temperature, 48.2° F.) The generation of heat began at 6.15 p. m. at this point, which was to one side of the cluster, and is to be attributed to the movement of the bees in forming a definite cluster. At 6:30 p. m. a rise in temperature was noticed on thermometer 19, at the other side of the cluster. Until 10:15 p. m. the changes in temperature are probably to be interpreted as incidental to the formation of a compact cluster, and from this time until the next day at the close of the series of readings the thermometers within the cluster showed a considerably higher temperature than the outer air, or than the thermometers outside the cluster. The maximum in this series was reached at 3:15 a. m., November 15, when thermometer 12 in the center of the cluster registered over 89.4° F.

After the coldest outside temperature was reached and the outer air began to get warmer (6:15 a. m., November 15), there was a tendency for the cluster temperatures to drop. This is somewhat noticeable in the case now being discussed, and is more clearly seen in records obtained in other series. In general after a period of cold, when the outside temperature begins to rise, the cluster temperatures drop slowly to meet the outside temperature. The generation of heat is reduced, or even discontinued, only to be increased when the outside temperature again drops, or when it gets high enough to induce greater activity, as in flight. It is found also by taking more frequent readings

is above about 69° F. that it is less constant than when it is below this temperature, indicating that at temperatures above this point the bees move about to some extent, while between 57° and 69° they are quiet, unless flight is desirable owing to a long confinement.

This series of readings is supported by numerous records taken on this and other colonies throughout the winter and, since all the observations tend to confirm what was first seen on the record presented here, the authors feel justified in presenting a definite statement of the reactions of the cluster to outside temperatures. It may be added that a careful study of the records of previous investigators fails to show a similar statement on this subject. When a colony is without brood, if the bees do not fly and are not disturbed and if the temperature does not go too high, the bees generate practically no heat until the coolest point among the bees reaches a temperature of about 57° F. At temperatures above 57° F. a compact cluster is not formed, but the bees are widely distributed over the combs. At the lower critical temperature, which is for the present stated as 57° F., the bees begin to form a compact cluster, and if the temperature of the air surrounding them continues to drop they begin to generate heat within the cluster, often reaching temperatures considerably higher than those at which they were formerly quiet and satisfied. It is evident therefore, that the temperature within the cluster is far from being uniform in winter, as has been, in a sense, assumed among practical beekeepers. At the temperature at which other insects become less active (begin hibernation) the honeybee becomes more active and generates heat, in some cases until the temperature within the cluster is as high as that of the brood nest in summer. To sum up, when the temperature of a colony of undisturbed broodless bees is above 57° F. and below about 69° F. the bees are quiet and their temperature drifts with the outer temperature; at lower temperatures they form a compact cluster, and the temperature within it is raised by heat

generated by the bees.

The authors desire to state that while the lower critical point, 57° F., appears rather well established, the observations up to the present do not justify too definite a statement concerning the upper limit of quiescence. It must be emphasized that these conditions do not apply when the colony has brood. The rearing of brood in winter causes a marked increase in heat production and constitutes a condition which may become one of the most disastrous that can befall a confined colony. This will be discussed at a later time.

When the heat production of the colony is explained, we are able to understand to some extent the divergence in the records obtained by other observers. It has, of course, long been known that bees generate heat and it has been pointed out that during cold weather the tem-

perature of the cluster is often higher than during warmer weather. While the temperatures previously recorded are in most cases abnormal, due to disturbance, the chief difficulty in understanding the phenomena which takes place is due to insufficient observations. For example, if between noon November 13 and 2 p. m. November 15 only a half dozen temperature records had been made for the cluster (and perhaps without finding the warmest part of it) and the outside air, it would have been impossible to determine the limits of heat production. Most observers have been satisfied with a few observations, and seemingly everyone who has inserted a thermometer in a hive has felt called upon to publish the results, thereby only confusing the problem.

(Concluded in the August Number)

Management of Three Thousand Colonies of Bees in Fifty Yards

By J. J. WILDER, Cordele, Ga.

Off to Other Fields

On the 26th of October of the year I reached the 1,200 colony mark in 16 apiaries. I left for Suwanee and Columbia counties, Fla. for the sole purpose of establishing a large comb honey business there. On a few previous visits I had learned that this was a good section for the production of comb honey, in fact the best I knew and as I could not produce comb honey in one pound sections at home as profitably as I could chunk and extracted honey I was compelled to hunt other fields where conditions were almost to the reverse. There was a great demand everywhere for comb honey in sections and my customers and the trade demanded that I put out honey in this form.

I had a large bee business established here and just as good surrounding territory around me as that I was occupying but of

course a little more remote, but I was fully ready for other field with ready capital to back the business, but don't think that I "shut down" here when I left the work, for rapid increase has been going on here ever since, which I shall show with my last article when I shall come back to this field.

On reaching my new field I learned that there were good many bees scattered about over the country in box hives and log gums, and some few in modern hives and that they could be bought at a reasonable price and that by going out well over the surrounding country a number could be bought up. This was great encouragement for I did not want to move bees from here or buy elsewhere and move them in cars into the new territory, in fact this would have brought on much more serious consideration than I had given the

venture as yet. I sought out by inquiring a man who was thoroughly familiar with the country and who could carry me over it and I employed him to do so, and I spent week looking it over, and learned all I could about it by inquiring among the natives and by observation.

The situation looked favorable from the standpoint of a start any way. I met a number of natives who had from 1 to 25 hives of bees. They would sell at from one to two dollars per hive. I traded with the man I viewed the country with to buy bees for me, taking them as he could find them over the country just in any kind of a hive or gum just so they were heavy and contained normal swarm of bees giving him information how to determine this. He agreed to take the job and go at it at once at 10c per colony in his county and 15c per colony for those he bought outside his county. I told him I would pay this if he would assure me as many as 300 colonies. He said he would. I told him that \$2.00 per colony was the limit and to buy just as far below this as possible. He promised to take care of me in this. I instructed him to send me the name and full address of everyone he bought bees from and the number of colonies and price of same.

I left him and returned home to wind the business up here for the season. In two weeks I heard from him and he had bought just a few over 300 colonies inclosing the addresses of those he bought from, the number colonies and prices to be paid. I went at once to my postoffice and got all the employees busy writing money orders to these parties who were selling me their bees and there was a long list of them and I expended for these bees \$560.20 and through the one who was buying them for me I sent the money orders to the parties and then took my helpers and went down and started work. The first day of December following we landed at O'Brien, Fla. which was a small town and near the center of the territory I wished to occupy.

The first thing a bill of lumber was bought and our first camp set up (see cut) which consisted of a

stall, feed room, wagon shelter, living room, packing room and work shop, all under one shelter and all in a row. This was the most economical and convenient structure we could get up. This



Our Temporary Headquarters

was headquarters for several seasons when a more modern structure was erected, also a six room cottage for manager of apiaries. The next thing a horse and wagon was purchased, then four apiary sites were looked up and privileges from land owners obtained. Then came the main work, that of gathering up the bees and hauling them to the most convenient apiary site. Hunting the bees up, preparing them for moving was no small job for they were in every kind of an old box, gum and hive, and many of them badly decayed. Then the hauling of some of them was a great job as they had to be gathered up and hauled 30 miles or more. But we did not do all the hauling with one wagon for at times we could get a wagon from parties who sold the bees to take a load. This helped us a considerable, but our holidays were all spent moving and arranging bees, but the task was accomplished the latter part of February at which time we returned to Georgia and left our animals in the care of our next door neighbor. As soon as we arrived home we shipped to the new location 350 hives and 700 supers, including sections and full sheets, foundations for same also the necessary brood frames, etc.

(Continued on page 270)

Honeybees Crop Report

Number of Colonies compared with last year. Condition of Bees
 Compared with last year. Condition of Nectar Plants
 Compared With Last Year

The Bureau of Statistics (Crop Estimates) on May 1 made an inquiry regarding the number of colonies of honeybees, their condition, and the condition of the principal nectar-bearing plants. The inquiry covered the additional subjects of the principal nectar-producing plants in the different sections and the approximate dates of nectar flow of each.

As this is the first inquiry on the subject, and no comparisons exist based on previous inquiries by the Bureau, it is difficult to draw conclusions, except in a most general way.

The number of colonies of bees in the United States this year, spring count, appears to be about 4 per cent above the number last year and 2 per cent above recent years are reported in the New England States, Pennsylvania, Georgia, Missouri, Nebraska, Kansas, Mississippi, Louisiana, and California. The loss in California and in a majority of the other States named was due to a severe epidemic of foul-brood disease. Increases are particularly marked in the North Central, Rocky Mountain and Pacific Coast States except as already noted.

The condition of the colonies is reported to be about 98 per cent of a normal, taking the United States as a whole. The condition is about 5 per cent above normal, however, in the Rocky Mountain and Pacific Coast States. The condition of colonies compared with last spring is about 4 per cent better, being reported as inferior only in Maine, Massachusetts, Connecticut, Virginia, West Virginia, Georgia, Ohio, Indiana, Illinois, Kansas, Kentucky, and Mississippi. It is generally better than last spring in the North Central States and very much better in the Rocky Mountain and Pacific Coast states.

The condition of nectar-bearing plants averages about 99 per cent

of a normal for the United States as a whole, ranging in the neighborhood of 95 in all the country east of the Rockies, excepting Texas, where it is 115, and about 105 per cent in the Rocky Mountain and Pacific Coast States, being highest, 120 per cent, in California. Compared with last year, the condition of nectar-bearing plants averages 3 per cent higher for the United States, being generally slightly below last year east of the Rockies, except in Texas, where it is 50 per cent better, and decidedly better in the Rocky Mountain and Pacific Coast States, reaching the very high figure of 175 per cent compared with last year in California, where moisture conditions in the white-sage country presage a bountiful nectar flow.

In the important honey-producing states of Texas, Colorado and California the outlook is very promising, showing numbers of colonies compared with recent years of 115, 115, and 85 and compared with last year of 112, 120, and 93 per cent, respectively; colony conditions compared with normal of 115, 110, and 107, and compared with last year of 120, 110 and 125 per cent; and condition of nectar-producing plants compared with normal of 115, 107 and 120 and compared with last year of 150, 107 and 175 per cent, respectively.

The number of colonies in the white clover belt of the North Central States is at least 5 per cent above the number last year, and, taken as a whole, the condition of the colonies is equal to that of last year; but the condition of nectar plants in these States is reported as not quite so good as last year, due partly to a late spring and partly to loss of clover from the drought in some sections.

An inquiry will be made in July regarding honey production, and another inquiry on the same subject will be made later in the season. It is hoped in the mean-

Condition of pastures, and percentage of plowing and planting done by May 1, 1914, and condition of honeybees 1914 with comparisons

State	Spring pasture condition May 1			Spring plowing, percent- age done by May 1			Spring planting percentage done by May 1			Honeybees					
										Number of Colon- ies com- pared with—	Condition of bees compared with—	Condition of nectar plants compared with—			
	1914	1913	10 year average	1914	1913	10 year average	1914	1913	8 year average	Last year	Usual	Last year	Normal	Last year	Normal
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.						
Maine.....	90	90	93	55	28	22	3	6	4	99	98	88	94	85	93
New Hampshire.....	87	96	90	32	35	26	4	12	8	96	94	100	91	98	95
Vermont.....	92	91	92	50	53	38	4	16	14	98	98	100	95	98	98
Massachusetts.....	87	93	88	30	43	32	12	21	16	96	95	93	90	90	91
Rhode Island.....	86	93	87	40	52	47	28	42	32	99	99	..	96	..	93
Connecticut.....	84	92	89	29	39	37	15	24	20	92	85	80	85	100	90
New York.....	82	89	85	41	58	45	9	32	24	103	102	100	95	93	95
New Jersey.....	86	93	88	52	68	64	39	55	45	103	100	105	98	110	98
Pennsylvania.....	85	89	84	51	73	71	25	47	40	98	95	100	94	90	93
Delaware.....	83	91	85	61	67	74	30	35	36	101	100	..	98	..	95
Maryland.....	85	90	85	59	68	76	27	34	34	100	96	100	95	90	93
Virginia.....	84	88	85	75	86	81	45	54	50	100	98	85	93	100	90
West Virginia.....	91	85	87	60	78	72	36	52	40	101	99	95	95	100	94
North Carolina.....	84	84	85	76	81	84	58	67	67	103	101	..	92	..	91
South Carolina.....	82	83	84	82	82	85	75	73	75	100	100	..	91	..	91
Georgia.....	86	85	88	84	84	83	74	75	74	98	95	95	94	100	93
Florida.....	84	87	86	85	90	77	80	85	62	103	101	105	97	110	95
Ohio.....	90	87	85	55	62	66	32	38	34	108	105	98	100	90	100
Indiana.....	90	89	85	55	52	56	37	38	35	115	110	90	96	90	95
Illinois.....	87	87	87	60	45	54	43	38	37	100	97	93	98	75	85
Michigan.....	82	82	78	49	43	44	33	31	31	103	101	101	98	93	94
Wisconsin.....	91	81	84	63	65	61	43	54	56	105	100	133	110	89	93
Minnesota.....	87	81	82	68	68	56	60	69	66	105	100	108	98	95	95
Iowa.....	90	86	85	70	58	63	56	52	50	115	105	112	100	93	95
Missouri.....	86	87	86	70	56	61	50	46	44	93	90	105	85	85	85
North Dakota.....	80	86	81	54	46	43	45	48	50	105	110	..	102	..	100
South Dakota.....	88	84	82	64	60	61	62	65	70	115	105	110	105	93	98
Nebraska.....	89	91	84	64	53	61	52	45	48	97	95	110	95	100	95
Kansas.....	80	89	83	69	62	68	55	50	55	90	85	85	86	90	85
Kentucky.....	89	88	87	69	72	70	40	47	40	115	115	96	95	85	93
Tennessee.....	91	89	88	75	75	74	54	62	54	115	120	105	95	93	92
Alabama.....	87	84	88	85	81	81	74	73	63	105	105	102	97	95	95
Mississippi.....	89	86	88	82	83	78	72	73	68	95	94	92	93	100	95
Louisiana.....	91	87	90	85	89	86	73	79	76	96	93	..	91	..	90
Texas.....	94	79	85	91	92	90	75	79	78	112	115	120	115	150	115
Oklahoma.....	85	85	86	87	85	84	73	71	70	110	107	100	98	99	96
Arkansas.....	90	87	89	78	80	76	64	71	65	100	99	..	92	..	90
Montana.....	91	88	89	69	55	67	59	42	51	110	120	..	105	..	100
Wyoming.....	98	98	91	61	50	64	45	35	52	110	106	..	108	..	100
Colorado.....	94	92	89	64	63	67	56	57	59	120	115	110	110	107	107
New Mexico.....	90	85	84	76	63	72	61	44	57	115	110	108	105	119	105
Arizona.....	92	84	89	90	90	81	84	80	71	110	115	115	105	106	105
Utah.....	98	87	93	82	76	75	78	68	72	105	110	..	105	..	102
Nevada.....	97	90	95	85	88	85	70	75	74	105	110	..	100	..	100
Idaho.....	97	90	94	80	56	73	70	47	62	130	150	126	115	123	110
Washington.....	99	91	92	87	77	77	81	70	80	105	108	115	102	..	100
Oregon.....	100	95	95	87	82	82	76	70	79	108	110	106	105	98	100
California.....	101	62	86	91	91	83	85	87	83	93	85	125	107	175	120
United States.....	88.3	87.1	85.6	70.9	67.2	66.6	56.4	57.0	54.6	103.7	101.9	104.4	97.8	103.0	99.1

time to secure the agreement of a large number of experienced and up-to-date beekeepers to furnish reports on the honey crop in order

that the estimates may be approximately correct and therefore of real value to honey producers and others interested.

The Pure Food Law Now in Effect

How It Affects the Producer

Bee-Keepers' Review—We have been, for some time, endeavoring to obtain some information from the authorities at Washington regarding the marking of comb honey for Interstate Commerce to comply with the net weight laws which are now in force. We are just in receipt of a telegram from C. L. Alsberg, who is head of that department, regarding this matter and we enclose you herewith a copy of same.

You will notice that it is necessary to mark each individual section of honey, as they consider same a unit, with the net weight of the eatable portion. According to this, as we understand it, comb honey graded according to our rules weighing $13\frac{1}{2}$ ounces, must now be stamped "Minimum weight $12\frac{1}{2}$ oz.," as the wooden portion of the section approximately weighs an ounce.

We believe that the attention of all bee-keepers should be called to this point, as it will be necessary for them to mark each individual section of honey with its net weight, thus causing extra labor, also expense for rubber stamps, pads, etc.

We would appreciate it, if you will bring the contents of this telegram before the readers of your publication.

Very truly,
Colorado Honey Producers' Association, F. Rauchfuss, Mgr.

From letter above referred to just received; quote the following from it.

"We note the custom of your association and in that connection your attention is particularly called to paragraph H, as suggesting a convenient method of branding which will meet your conditions. The Statement of weight, however, should be that of the contents,

EXCLUSIVE OF THE WOODEN FRAME."

The telegram referred to is as follows:

Washington, D. C., May 25.
Frank Rauchfuss,

1440 Market St., Denver, Colo.,

Regarding branding honey in frames or cartons weight of actual contents should be marked upon frames of individual units or upon outside of cartons when used regulations paragraph H minimum weight blank ounces is suggested as convenient form. Letter follows.

C. L. ALSBERG.

(Below we publish the complete ruling as it is very important that honey producers know the rulings in detail, so they can comply with same in preparing their 1914 crop for the market. It will be noted that these regulations do not include what honey one sells in his own state, but is an interstate ruling. Ed).

Packages of Food Must Tell the Truth as to Contents—

The regulations for the carrying out of the so-called "net weight law," which compels manufacturers to make a clear statement of the weight, volume, or contents of their packages of food, were signed May 11 by the Secretaries of the Treasury, Agriculture, and Commerce. These regulations apply to foods shipped in interstate commerce or sold in the District of Columbia or the Territories. The regulations as signed become effective at once, although the law, passed March 3, 1913, as an amendment to the food and drugs act, defers the exacting of penalties for violations until September 3, 1914.

The regulations, in general, require that the manufacturer of foods shall plainly mark all packages, bottles, or other containers holding more than 2 ounces avoirdupois.

pois, or more than 1 fluid ounce, to show the net weight or volume of the contents. The measure must be stated in avoirdupois pounds and ounces, United States gallons, quarts, pints, or fluid ounces, United States standard bushels, half bushels, pecks, quarts, pints or half pints. The contents by a like method may be expressed in terms of metric weight or measure.

The volume of liquids must be computed at 68° F.

The quantity stated on the container must represent the actual quantity of food exclusive of wrappings and container.

(Comb honey in Sections, each section must be marked net weight exclusive of wood. (Ed.)

(Continued on page 267)

EDITORIAL CORNER

May 26, 1914

Mr. E. D. Townsend,
North Star, Michigan,
Dear Mr. Townsend:

On Saturday I asked the Bureau of Statistics to send you a marked copy of Farmers' Bulletin No. 598, "The Agricultural Outlook" in which you will find the first report on honey. This is in the nature of a forecast as to the probable 1914 crop, based on number and condition of colonies and condition of the chief honey plants. Naturally since this is the first effort of this kind the bee-keepers reporting were mostly without experience in such work and it was sometimes not easy to know how to accept their figures. In some cases the questions were seemingly not fully understood. The report must be taken with these facts in mind, and it is hoped that in the future the reports will increase in completeness and accuracy. There is a tendency on the part of most persons reporting to be conservative in their figures. For example a bee-keeper might say that the bees were never in better shape and then grade them 105 percent compared with normal, when they may be 50 percent or more above normal. These features will probably diminish with future reports.

The necessity now is for more reporters who are experienced bee-keepers and close observers. The present list contains some 3000 names but twice that number for the next report would be better. After all the accuracy and value of these reports rests with the individual bee-keepers who help.

You will understand, of course,

that this work does not come from the Bureau of Entomology but we are helping in every way possible to make this a success.

Very truly yours,

E. F. PHILLIPS,

In Charge Bee Culture Investigations.

Suggestions on Comb Honey Production

By E. C. BIRD, Boulder, Colorado

The comb honey producer in the west must contend with many disadvantages. His producing season is short. He must work and plan for nine or ten months getting material in readiness for the season and prepare his crop for market while the ten to twelve weeks of producing weather is fraught with the responsibility for the whole year's output.

He must contend with most varied weather conditions—extremes of heat and cold, excesses of dryness and dampness—unusual sallies of wind, unspeakable conditions of roadways and innumerable theories and devices purporting to be essential to the successful production of a marketable crop of honey. Most bee-keepers take pride in marketing a high class article, acceptable to the most fastidious consumers and as well have an additional interest in the higher price the best grade will command. With hives and supers fairly tight, no cracks and no cold corners, under a honey board or quilt, so that the work in the sections can be going on day and night during the whole

nectar season, an average quality of finished sections may be expected.

A few suggestions are here offered. No section should be used which would require more than a few passes at the contact edges to make it clean and of inviting appearance. When a starter falls down after the work has begun, it should be pried out of place and a new one inserted, the operator being careful to scrape the wax from the separators, if attached on either side, lest the bees attach the new section to the separator at the same place which they are apt to do if any wax is left there. Whether you use section holders or slatted supers the sections should be even over the top surface and wedged tightly to keep them in position; so tightly in fact that the super can be inverted without a sound of friction or motion.

For nice even work all the bee ways must correspond each to each with the separators neither high or low, for when the flow is on and the bees crowded for room, they will build deeper cells where the separator margin leaves room, making a jog in the capping surface, spoiling the desired smooth appearance. Separators or fences if carefully cleaned and placed will tend toward a greater number of filled sections for less weight can be stored in a given space while the surplus will be carried on to fill sections elsewhere.

Some bee-keepers leave the filled supers on the hive until three or four have accumulated, placing the new sections underneath. We prefer removing, if two are filled and as much oftener as convenience in hauling in will allow. We pile the filled supers evenly and a paper underneath to catch any drip both before and after cleaning if any is stacked away in supers before grading and casing. Careful handling of filled sections from the hive to the shipping case is an absolute necessity for otherwise handled will daub and stain the sections to a great degree.

Most bee-keepers whom I have known, have their grading bench in front of a series of windows so where the grading is done, the light falls upon the grades face while the sections on the bench

reflect only the light of the room. Before beginning to grade, place your bench so you can stand between it and the window and grade with your back to the light. You can then grade the near face of the sections at a glance and catch the opposite side as you pass them toward the case, handling the lot as fast as you can pick them up. Place doubtful weight sections on your grading scales. See that the glass is clean before inserting the sections.

Palmetto and Mangrove Honey

At the present writing (June 10th) the saw palmetto, in the neighborhood of Central Florida on a line drawn east and west, is about over blooming, and the mangrove buds are about to begin blossoming. The palmetto has bloomed unusually full this year, but the dry weather of the month of May and even earlier, has caused the blossoming racemes to dry up much earlier than usual. The bees worked fairly well on it but there will not be a heavy crop from that source this year. On the coast, the forest fires this spring were much more severe than usual, as a result the young palmetto was damaged for large areas to such an extent that no blossoms will appear, or if any do show before opening, needless to say no nectar in such blossoms. When it yields well the saw (or scrub) palmetto is a source of honey unrivaled in color, body or flavor, by any honey in the world.—E. G. B.

The reports to date, June 17th nearly all appear to be favorable for a good crop of honey. Bees came through the winter in better shape than usual and up to date honey secretion seems to be good as far as reported. Here in Michigan the season has been on for about ten days. Clover yields well when the weather will permit the bees to fly. The first three days of the flow was very hot and the bees did fine, then three days of cold raw winds, almost too bad for the bees to fly, saying nothing of working on clover. It is now gradually warming up and the prospects are some better for honey gathering weather.

If we get the big crop of honey that is promising it will mean extra good quality, for, it can be depended upon that where a good liberal flow of honey is had that the quality will be good.

If we get the looked-for good crop of honey, it will not necessarily mean low prices, for we will let the newspapers know we have a good crop of extra good quality of honey to offer this year and all will want "a little more of that fine honey, please" and the crop will disappear as usual. We anticipate the buyer being "on his job" hammering down the price, as usual, and it behoves the producer to have a mind of his own, and ask a fair price for his well earned product, or you may wake up some morning (later) and find the dealer is pocketing a considerable of the proceeds of your hard labor. If you have never studied the sales end of your business, begin this year.

Wires Electrically Embedded

Tally one more for the foundation fastened in brood frames by use of an electric current.

Within the past month we have fastened wires in light brood foundation in more than a thousand frames, using a current from the electric power wires that enter the shop through a switch board. As the current was too powerful we "toned it down" by using 4 32-candle power incandescent lamps as a resistance coil. The current is then slowed down sufficiently and instead of melting the small wires of the frames merely heats them, melting them quickly into the very midrib of the foundation. Then the iron points of contact are lifted from the wires and the cooling wire hardens the wax around it immediately. The wire is left firmly melted in the wax at every point of contact where it crosses a cell-wall. We moved 75 hives full of such frames, in hot weather, a distance of 50 miles, in a heavy auto-truck solid tires in three hours and only one sheet of foundation was entirely out of the frame, that due to the fact that the wooden strip had fallen out of the kerf from the heavy jolting. In some places the rough road would lift the entire pile of hives two inches

off the floor of the truck and bump them down with a solid THUD. That made us wince, but as we have stated no serious damage resulted. We feel sure that, had the foundation been put in by the usual pressing methods, the loss from falling out would have been much more severe. And the work is SO easy! A touch, a sizzle and snap and lo, the wire is melted in for good.—E. G. B.

A Heart to Heart Talk From the Producer to the Producer

In regard to your Honey Crop report both for the U. S. Crop Report and the crop report blank to be filled out that will be found in the back part of this number of the Review.

Producers seem to be reluctant about reporting their crop of honey especially is this true if the crop be large. Wish we had words to convince the producer of honey that this is all wrong, why! the buyer or dealer has a hundred ways of finding out what the crop is, while the producer has but few. Admitting that the dealers know what the crop is, don't you see the importance of the producer knowing! If the crop is large the producer should know it to sell intelligently. If the crop is small the producer should know it at once so no one can impose upon him, he being as well posted as the buyer. Many of you will be asked to furnish a crop report for the Government. You should avail yourself of this privilege to spread the condition of the crop, whether large or small as the case may be and take the word of the Editor, the fraternity will be the gainer. A crop report blank will be found in the back part of this number of the Review and we earnestly urge all to fill out this blank faithfully, tear out and return to this office as soon as the main honey flow is over. It is not necessary that the one reporting count their colonies by the hundred, as it is facts we are after and in many cases the small bee-keeper can furnish this as well as the larger one.

Let me repeat! It is for the best of the producer to know whether the honey crop is large or small at the earliest possible moment, lest in case of a short crop the buyer

might take advantage of some producer who did not know. Knowing the Review as absolutely a producers' paper should give you confidence in what is advised along the line of financial or other advice.

We copy the following from a private letter from Vice President Pellett: It seems to me that we should begin to plan the place of meeting for the next NATIONAL as this should be settled several months in advance." Just so President Pellett! The Review should have this information very soon now to do justice in advertising the meeting as it should be. To start something, The California State Bee-keepers' Ass'n. also the management of the Exposition at San Francisco have offered us a special invitation to meet with them next year. There are other invitations to be considered.

The methods used by Mr. Wilder in getting his start in bee-keeping contain some very valuable points. He was looking for every chance possible to save money on the bees or material bought. He bought up all the bees in old boxes that he could find and you are not expected to believe that he paid very high prices for them. Then by making his own hives another quite large saving was made. Mr. Wilder did not say—but his hives, including bottoms, covers and frames probably did not cost him one dollar each. Foundation, supers and other accessories would probably be extra. Mr. Wilder has wisely kept within the limits of the possibilities of the industry in this. At the present prices of supplies a hive with one comb honey super nailed up and painted will cost the bee-keeper more than three dollars each, if he counts his time, as he should, and wires his frame and uses full sheets of foundation. If a bee-keeper buys his hives by the hundred he will soon find himself pretty heavily involved unless he gets very good honey crops and sells them to the best advantage. But Mr. Wilder's plan is the safer and shows an economical method that will win in most instances. These are the men who stay in the business year after year.

W. F.

Does the Size of the Hive Regulate the Size of the Colony?

During the last week of April we purchased three yards of bees located 25 miles north of Northstar. Those bees are principally in Langstroth frames and hives, a few being in odd size hives and frames. As usual this last mild Winter, these bees wintered almost perfectly, outside in packing cases. At this time we will speak of the bees that are in the regular Langstroth frame. Some of those hives contained seven frames, a considerable number eight frames, some contained twelve frames, twenty-five or thirty contained hives with sixteen frames, likely fifteen or twenty hives contained 20 frames each. They were all wintered single story, some of the hives being nearly three feet long. (wide.) Having an opportunity to watch results in the breeding up of bees in Spring in the different size hives on a somewhat extensive scale, we are in a position to determine quite accurate results. We are positive after measuring results, that with perfect wintering those who use as small a hive as the eight or ten frame Langstroth hive, do not know what a strong swarm of bees is, for, those bees seemed to breed up into colonies comparative to the size of the hive that contained them. Even the twenty frame hives contained twice as much brood and bees as the ten frame and the sixteen frame twice as much as the eight frame hive. The fact of the size of the hive determining the size of the colony produced, between the limit of from seven to 21 frames, was shown up so strikingly in those yards of some over 200 colonies, that if we could have had him with us, among those bees we could have convinced the man who invented prejudice that the eight frame hive is not more than half large enough to hold the brood of any normal queen.

The Bee-keeping Outlook in the West

The honey crop report of the department of Agriculture relative to the important western honey producing states is very significant for this season. I have taken the twelve states of Texas, Montana,

Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon and California.

Two-thirds of the shipping honey of the United States is probably produced in these states, and I wonder if it will not run higher than that. At any rate a report of average conditions in these states will be interesting.

The number of colonies of bees compared with last year in the United States is given as 103.7 while in these twelve states it is 110.25.

The number of colonies of bees compared with the usual number in the United States is given as 101.9 while in these twelve states it is given as 113.

The condition of bees compared with last year in the United States is given as 104.4 while in these states it is 116.

The condition of bees compared with normal in the United States is given as 97.8 while in these twelve western states it is 107.

The condition of nectar plants compared with last year in the United States is given as 103 while in these western states it is 125.5.

The condition of nectar plants compared with normal in the United States is given as 99.1 while in the twelve states mentioned it is 105.3.

In these states we see that is is estimated there are 10 per cent more bees than last year in 16 per cent better condition and with nectar plants in 25 per cent better condition. How many more carloads of honey will that make than these states shipped last year? Add the percentages together and it makes 51 per cent more than last year. Is that correct? If conditions remain as they are now it will not be far off to put the crop at 50 per cent more than last year.

W. F.

What Constitutes a National Member?

We are often asked what constitutes membership in the National Bee-keepers' Association. In each number of the Bee-keepers' Review under the heading The National Beekeepers' Association and its Affiliated Associations will be found a list of Affiliated associations and the address of their se-

cretaries. If you are a member of one of those associations, in good standing, then you are a member of the National Association, otherwise not. When a prospective member sends \$1.50 to this office, \$1.00 is applied upon his subscription to the Review and 50c sent to his nearest secretary which pays a member's subscription and dues for one year.

In case the applicant lives in a state having no affiliated association, he is assigned to the NEARER association. It will be noticed that there is no fee going to the National headquarters, all headquarter expenses being paid from the proceeds of the Review. If the members will keep in mind that the thirty-two Affiliated Associations ARE THE NATIONAL ASSOCIATION, some confusion will be avoided.

The Goldenrod Cover Returned

On account of increase of advertising requiring extra space in the Review and for other reasons such as much valuable matter to be published requiring the four extra pages, we have returned the Goldenrod cover as you have likely observed ere this. Does the reader prefer the Goldenrod cover? If you prefer the Goldenrod cover, with your cooperation it may be possible to continue it. We would like to have an expression from our subscribers regarding the Goldenrod cover for the Review.

Mr. Baldwin's description of his electric wire embedder is interesting to me for I have one rigged up, different however in some particulars from Mr. Baldwin's. I use seven lamps instead of four and change the number used according to the strength of the current. I do not think that five seconds is used in embedding the wire. All of my frames are wired with four strands in one piece and as my contact points are nothing but awls with the wire carrying the current entering through the wooden handles, I can push the points into the wire holes at each end of the wire and embed all four wires at once. To insure even embedding work have a board made just the size of the inside of the frames and rounded off so that the pres-

sure upon the foundation surface will be uniform throughout. This can be done by planing off the edges and sides until it is found to be right. The wires not being drawn real tight the wires are bound to sag some when the board is laid on and this rounding of the surface is necessary for good work. It is important that the wires be not embedded too far or the foundation will be cut in two. And if it does not cut it in two it may go through far enough so that the bees are inclined to gnaw the foundation in two. This is true however of the work done by the spur wire embedder. I should say that the wire should go into the wax about one-third of the way, that is should cut through the side wall of the foundation but should not penetrate far into the bottom of the cells. If it does it may cause trouble.

Rigging up my outfit cost about four dollars, but it can be done for less in some instances no doubt. I have had about two thousand frames of foundation embedded with the current and it is certainly a pleasure to see the way the wax melts around those wires.--W. F.

An appropriation of \$6500 for Bee Culture Investigations, also \$12000 for a building for the Bee Culture work is being asked, for the Department of Agriculture, Washington, D. C. Under date of April 24th Director Carr writes that he is in Washington, urging that this bill which is in the Senate be passed. The writer has the assurance that both our Senators, Hon. Wm. A. Smith and Hon. Charles E. Townsend, also Representative Hon. Louis C. Cramton will all three support the bill, so if others are as successful as we, the bill will certainly pass. Another instance where the National is a help to bee-keepers, still some hold back and ask "What good is the National anyhow!"

Wonderful Flow from Orange

The present spring has witnessed the most wonderful flow from Orange blossoms that Florida has known for many years past. The winter just passed had been very favorable, just cool enough to re-

tard growth, but not cold enough to damage the trees at all, nor even sap the vitality of the groves. Rains came in good time, and when, about the end of February (the usual blossoming time) the small white buds began to open on the advanced groves, the weather, with exception of three days, was all that could be desired. I have often remarked, that days too sunny and warm, as well as too dry a condition of the atmosphere are both alike fatal to best yields from Orange. The blossoms are so open, that the winds and sun quickly dry up the nectar, if the sun is too hot, and the air is too dry. This year conditions in both respects were ideal. The sun was partly obscured for much of the day, for day after day, and the air was almost wet enough to wring out; as witness our salt cellar! When the buds first open there is seldom much nectar; this year it was especially true; but when after a week or ten days of blooming had passed, the honey began to roll in. Never in all my previous experiences have I seen the hives gain in weight so rapidly. The roar of the bees could be heard by passers by, as the bees flew over a road running along the largest grove near us. And the quality of the honey is finer this year than it usually is. I do not mean to say, that orange honey is in itself finer one year than another. Who knows? I DO know that some years it is impossible to obtain it in its purity. Either the bees carry up honey from the brood chamber, containing dark honey from previous seasons, or else they carry in darker honey from other sources in bloom at the same time as orange; among such are wild cherry, cherry laurel, oaks (they get honey as well as pollen from Live oaks) and other less clearly defined sources. But I am convinced that the greatest factor in darkening the color, destroying the flavor of pure orange honey, is the dark honey carried up from the brood chamber. This year, as I said, there seems to have been none of either; for the bloom was unusually abundant and rich in nectar from orange and the hives as a rule were light in honey, owing to a poor year last season, in the regions where dark honey prevails.

Certainly this season, the honey secured by bee-men all over the orange belt, is of a clear, almost light straw color, good body, and of a flavor such that nothing equals it. For example, a friend of ours, to whom we gave a jar of the honey came down into the pantry where

his wife was opening the jar, and, sniffing the air, asked "Who has orange blossoms here?" That is surely "bouquet" enough to satisfy anyone! Samples sent North bring back the verdict from large dealers "The honey is SUPERB."

E. G. B.

Field Notes From Tennessee

J. M. BUCHANAN, Franklin, Tenn.

In the clover sections of our state we are "up against it," good and hard. The drouth last summer killed nearly all the young white clover, and very little honey will be gathered from that source. Then it has been dry all through May, and there is nothing in sight for a honey crop, unless it is honeydew, and may heaven preserve us from that.

Ten years ago I made a hundred or more brood frames. These were in all respects like the standard Hofman, except that the top bar was about a sixteenth inch wider, and they were made of poplar instead of pine. These frames have been in promiscuous use through the yards. Now, wherever you find one of those home-made frames, you will find the top bar clean, while the factory made frames are covered with bur-combs after three or four years' use. Why the difference? I think it is on account of a nearer perfect bee-space between the homemade frames. This is respectfully submitted to the manufacturers.

I want to give a further report of the hundred colonies wintered in two-story hives. At the beginning of the honey flow the excluders were put on, and the queens and open brood placed in the lower story. They had four or five frames of brood in the upper story, and an empty comb or two in the brood chamber. Although these averaged twenty-five per cent stronger than the one-story colonies, only five per cent made any preparations for swarming, while the one-story colonies in my own yard built cells or

swarmed in thirty per cent of such hives, and my neighbors report from fifty to one hundred per cent of swarms. It is too early yet, June 5th, to give a report of honey stored by these colonies.

Of the honey produced in the South, perhaps more than half is used in the form of bulk comb. White honey in new combs is cut from the frame and packed in buckets and filled in with liquid honey. Extracted honey from tupelo or sourwood is in good demand for this purpose as these honeys do not granulate. We find the five and ten pound friction-top pails the most satisfactory package for bulk honey. The price varies from ten to fifteen cents wholesale. For home use this is much the best form of honey to produce, as it requires very little equipment and less care than with sections or extracted honey.

It is quite a problem to keep moths out of combs that are not in care of the bees. Fumigating with carbon bi-sulphide will kill the moths and larvae, but very few eggs will be affected by it. These eggs hatch out in from twelve to fourteen days, so it would be well to give a second dose in about two weeks. For a stack of six supers of ten full depth combs each, it will take four or five ounces of the liquid. Place this in a pan in an empty super on top of the combs, and close up tight for twelve hours. Comb honey can be fumigated with bi-sulphide but should be well aired afterwards to remove the odor of the drug.

The National Bee-Keepers' Association And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
.....Amherst, Mass.
FRANK C. PELLETT, Vice-Pres....
.....Atlantic, Iowa
GEORGE W. WILLIAMS Sec.-Treas-
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Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
.....G. M. Frizzell Temple Ariz.
ADIRONDACK—H. E. Gray.....
.....Fort Edward, N. Y.
COLORADO—Wesley Foster.....
.....Boulder, Colo.
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HAMPSHIRE—HAMPDEN—FRANKLIN
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.....Amherst, Mass.
IDAHO—R. D. Bradshaw, Notus, Ida.
TWIN FALLS—C. H. Stinson.....
.....Twin Falls, Ida.
IDAHO HONEY PRODUCERS' ASS'N—
F. C. Bowman.....Idaho Falls.
ILLINOIS—Jas. A. Stone.....
.....Rt. 4 Springfield, Ill.
INDIANA—Geo. W. Williams.....
.....Redkey, Ind.
IOWA—S. W. Snyder, Center Point, Ia.
KANSAS—O. A. Keen, Topeka, Kans.
MASS. EASTERN SOCIETY OF
BEE-KEEPERS.....
Leslie A. M. Stewart, Franklin, Mass.
MICHIGAN—O. H. Schmidt.....
.....Rt. 5, Bay City Mich.
MINNESOTA—Dr. L. D. Leonard....
515 Syndicate Bldg., Minneapolis, Minn.
MISSOURI—J. F. Diemer..Liberty, Mo.

NEW JERSEY—E. G. Carr.....
.....New Egypt, N. J.
N. CALIFORNIA—Alwin P. Heim..
.....Box 16, Fair Oaks, Calif.
N. MICHIGAN—Ira D. Bartlett....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola Ohio.
OREGON—H. Wilson.....Corvallis, Or
THE NEW MEXICO BRANCH—
Henry C. Barron, Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger...
.....Liverpool, Pa.
PUERTO RICO—J. W. Van Leenhoff
Ponce, Puerto Rico, 11 Marina, St.
SOUTH IDAHO AND EAST OREGON—
R. D. Bradshaw.....Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—Willis C. Collier, Box 154..
.....Goliad Texas.
VERMONT—P. E. Crane.....
.....Middlebury, Vt.
VINTON BEE-KEEPERS' ASS'N—
.....E. J. Winder, Vernal, Utah.
WASHINGTON—J. B. Ramage.....
.....Rt. 2, N. Yakima, Wash.
WISCONSIN—Gus Dittmer.....
.....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

Minutes of the National Bee-Keepers' Association In Convention

Assembled at the Planters' Hotel, St. Louis, Mo., Feb. 17-18-19, 1914

Note—In the absence of Secretary E. B. Tyrrell, President Gates appointed Wesley Foster, Secretary Pro Tem.

**Morning Session Tuesday, Feb. 17,
9:30 a. m.**

President Burton N. Gates called the convention to order promptly at 9:30 and announced the following committee appointments.

RESOLUTIONS: Dr. G. Bohrer, (Kansas); W. B. Moore, (Illinois); Dr. E. F. Phillips, (Pennsylvania).

AUDITING: Frank C. Pellett, (Iowa); Mr. R. A. Holekamp, (Mis-

souri); Mr. Wesley Foster, (Colorado).

POLICY & EXTENSION: Dr. J. S. Ward, (Tennessee); D. C. Polhemus, (Colorado); C. H. Baldwin, (Indiana). Note—In absence of Mr. Baldwin, Mr. G. W. Williams of Indiana served.

CONSTITUTION: Mr. Wesley Foster, (Colorado); Mr. W. B. Moore, (Illinois); Mr. J. H. Stoneman, (Idaho).

It was moved and carried that the President appoint a Credentials committee. The following appointments were made:

CREDENTIALS: Mr. C. P. Dadant, (Illinois); Mr. J. M. Buchanan, (Tennessee); Dr. G. Bohrer, (Kansas).

President Gates declared a recess till 10:45 a. m. to give the Credentials Committee an oppor-

tunity to pass upon Delegates' Credentials and prepare their report.

President Gates called the Convention to order at 10:15 a. m. and called upon Mr. C. P. Dadant, Chairman of The Credentials Committee who reported as follows:

Delegate	Affiliated Association	Votes	Member-ship
W. B. Moore, Illinois.....		4	190
B. N. Gates, Hampshire H. F. Bee-Keepers' Ass'n..		1	49
B. N. Gates, Worcester County.....		2	80
R. B. Daly, Adirondack, (Absent).....		1	24
C. H. Baldwin, Indiana (Absent)	G. W. Williams (Alternate)...	3	135
E. J. Baxter, Chicago N. W.....		1	38
Wesley Foster, Northern California.....		1	50
Dr. G. Bohrer, Kansas.....		1	25
R. A. Holekamp, Missouri.....		2	85
J. H. Stoneman, Idaho		4	158
F. C. Pellett, Iowa.....		1	50
E. D. Townsend, Michigan.....		4	160
E. F. Phillips, Pennsylvania.....		6	251
D. C. Polhemus, Colorado.....		2	79
J. S. Ward, Tennessee.....		3	110

The report of the Credentials committee was adopted by the convention. The Delegates were then recognized by the Convention each Delegate rising as his name was called.

An invitation from The Anheuser-Busch Brewing Ass'n to visit their brewery was read and arrangements for those wishing to visit the plant were referred to Mr. Holekamp.

An invitation from Blanke and Hauck Mfg. Co. also was read inviting all beekeepers attending to visit their place of business.

By general consent it was left with Mr. R. A. Holekamp to arrange for a photographer to take a group picture of the convention.

A motion was carried to hear the reports of the officers of the Association and President Gates gave his annual report and address. The president's address contained suggestions as to the change in Constitution and a copy was upon motion being carried referred to the committee on Constitution.

The report of Vice-President Surface was read, Prof. Surface not being present on account of sickness in his family. His report was

accepted and filed with the proceedings.

Treasurer Dadant gave the Treasurer's report which was referred to the Auditing Committee.

Mr. C. P. Dadant, Chairman of the Fund Committee appointed at the 1913 convention in Cincinnati to purchase a suitable present for Retiring General-Manager France reported the purchase of a chair, inscribed with a suitable plate, which had been sent to Mr. France as a token of the love felt for him by the members of the National Bee-Keepers' Association.

The report was referred to the Auditing Committee, with the understanding that the names of contributors be not published in the proceedings.

Mr. E. D. Townsend as Editor of the Review gave his report which was referred to the Auditing Committee.

The suggestions in Mr. Townsend's paper on buying agents for the National was referred to the Committee on Policy and Extension.

The Committee on Standardization of Color of Honey appointed at the Cincinnati convention in 1913

reported through Dr. E. F. Phillips, Chairman, no progress made as yet and report delayed on account of unforeseen difficulties.

Upon the termination of some discussion on color of honey by Dr. Bohrer and others the convention adjourned till the afternoon session.

Adjournment at 11:45 a. m.

**Tuesday Afternoon Session 1 p. m.
February 17, 1914**

The convention was called to order at 1 p m.. by President Gates, Chairman C. P. Dadant of the Credentials committee made a further report of delegates as follows:

Delegate Ass'n	Member- Vote ship
D. H. Morris, Ohio.....2	59
E. G. Carr, New Jersey..2	65

The report was received and for the benefit of bee-keepers coming in late the roll call of delegates was again read, each delegate rising for recognition as his name was called.

Mr. Frank C. Pellett, Chairman of Auditing Committee made the following report.

We, your Auditing Committee report that we have examined the Treasurer's report and find it correct. We recommend that 68 cents be charged to profit and loss on the Editor's report to make books balance.

Signed, Frank C. Pellett,
Chairman.

The report of the Auditing committee was received and filed.

Prof. Morley Pettit of the Ontario Agricultural College, Guelph, Ontario, Canada, spoke on Apicultural Education.

A few points he emphasized were these:

European foul brood is a blessing in disguise—It makes bee-keepers of those who have to combat it.

Every man should be his own inspector.

The distribution and marketing of honey very important now.

Education for distribution is necessary.

Cooperative marketing must begin locally.

Advertising necessary.

House to house canvassing is effective.

Displays in stores important.

Advertising a branded product

would aid distribution and sales.

Mr. Frank C. Pellett spoke on Developing The Bee-keeping Industry of Iowa. Securing foul brood legislation and the need for a publicity campaign were emphasized in his talk. In conclusion he extended the invitation of the Iowa Bee-keepers' Ass'n and the Des Moines Commercial club to the National Bee-keepers' Association to meet in Des Moines in 1915.

In the general discussion which followed Mr. Pellett's address Mr. Geo. W. Williams of Indiana explained the working of the Indiana honey day and how it stimulated consumption.

A motion was made and carried to refer all papers read, dealing with policies of the National Association, to the Committee on Policy and Extension.

Mr. W. J. Lewis of St. Louis spoke on Publicity.

Mr. W. B. Moore read Mr. A. C. Miller's article entitled "Why." In the general discussion following Mr. Moore suggested the per capita tax for publicity purposes. Prof. Pettit said the government of Canada aids cooperation in selling.

In the discussion on honey crop reports it was decided to have a special committee on honey crop reports to cooperate with the crop reporting bureau of the Department of Agriculture.

President Gates appointed the following special committee:

HONEY CROP REPORTS: Frank C. Pellett, Chairman; J. H. Stoneman; Wesley Foster.

Adjournment.

**Evening Session February 17 1914
7 p. m.**

President Gates called the convention to order.

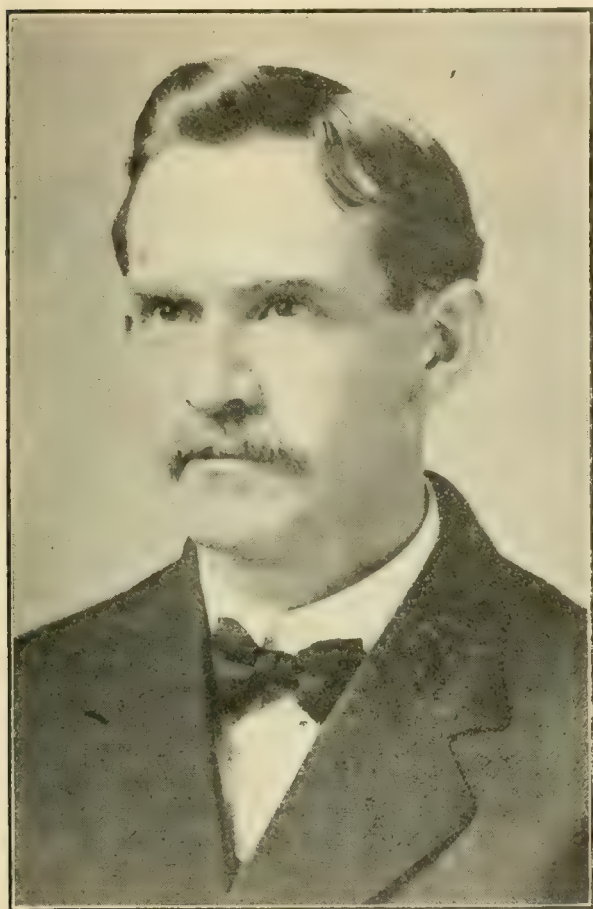
The invitation of the Anheuser-Busch Brewing Ass'n was discussed and the matter was carried over for consideration later.

The committee on Policy and Extension reported through Chairman J. S. Ward as follows:

Your committee on Policy and Extension beg leave to submit the following tentative report. First, we find from the expressions already given during the morning and afternoon sessions that a number of changes in the policy of the Association is desired and we feel sure we cannot give all these mat-

ters due consideration and therefore ask for assistance in the appointing of some two or three sub-committees to consider some of the special questions as follows:

1st. A committee on Policy of the Review continuing the work of Purchase and Sales.



Director E. G. Carr, New Egypt, N. J. Elected at St. Louis for a full term of two years.

2nd. A standing committee on a code of methods and policies of the Association.

3rd. A Publicity Committee. (Publication Committee?)

Reports of these committees may be discussed and acted upon by the delegates in session or given to your present committee on Policy and Extension to be incorporated in the final report.

Signed, J. S. Ward,
Chairman.

After considerable discussion on the policies of the Association a motion was made and carried for the appointment of committees of

three as suggested by the committee on Policy and Extension.

The resolution laid before the Policy and Extension Committee was referred to the program committee. *

* (The Secretary pro tem does not know of a committee being in existence called the program committee. W. F.)

The following is the resolution referred to above:

Resolved, That the National Bee-keepers' Association designate some special day during each year to be observed as "Honey Day" and that the Association ask each of its members, and all other honey producers a contribution of _____ cents for each colony of bees owned by them, to be used in educational work in inducing the Public to "Eat More Honey," said sum to be used in all legitimate ways to bring our product before the public. And be it further resolved that the Board of Directors authorize some competent agent to solicit and collect such money, and use same under their supervision, for the above purpose.

Resolution presented by Mr. Geo. W. Williams.

Bee Inspection

Mr. E. G. Carr read his paper on Bee-Keeping in New Jersey. Following Mr. Carr's paper, Prof. Pettit, Mr. Frank Pellett, Dr. Bohrer, and others spoke on various phases of the foul brood situation.

Dr. J. S. Ward read the paper of J. E. Pleasant's entitled, "Bee-keeping in California."

"California Apiculture Up and Down" by J. D. Bixby was read by Wesley Foster.

Mr. Moore read "Bee-keeping as a Money Making Proposition" by J. J. Wilder.

By general consent Mr. C. P. Dant was made eligible to serve on committees.

Sub Committees of Policy and Extension Committee:

Purchase and Sale of Supplies: Frank C. Pellett, E. G. Carr, E. D. Townsend.

Code and Policy: E. J. Baxter, J. H. Stoneman, D. C. Polhemus.

Publicity: W. B. Moore, Dr. E. F. Phillips, Geo. W. Williams.

Adjournment.

(Concluded in August Review)

Eastern Illinois Bee-Keepers' Field Day

Will again be held in the Bee yard of H. S. Duby, St. Anne, Illinois, July the 11th. Diseased colonies will be on the ground for the visitors to study, and lectures will be given by the State Inspector and other prominent bee men. This is an annual affair for the Eastern Illinois Bee-Keepers' Association and it is hoped that this meeting will be the best ever held. Bring your veil and come. Come and tell what you know and learn what you don't know.

CLARENCE DYON, Sec'y
WALTER SORENSON, Pres.

Attention Iowa Bee-Keepers'

The Iowa Branch of the National Association Will Hold two Meetings During July as Follows:

At Des Moines July 15 the meet-

ing will be held at the Dustman apiary at Bowsher station on the Colfax interurban railroad. Prof. C. E. Bartholomew of Ames and Frank C. Pellett, State Bee Inspector, will talk on subjects to be announced later. The central location and railroad connections make Des Moines of easy access. Demonstrations of accepted methods will be made for the benefit of anyone wishing information on any special line.

At Mt. Pleasant July 28th, will be held the sixth meeting of the season. C. P. Dadant, of Hamilton, Ill., and E. J. Baxter, President of Illinois Association, will be the principal speakers. Several Iowa beekeepers will also speak on subjects of timely interest. Bee-keepers from Illinois will find this meeting of easy access, and a large delegation from that state is hoped for. Missouri friends are also invited to attend.

National Suggestions

By J. M. Donaldson, New Jersey

With the harvest over, the crop sold supplies purchased and plans laid for the coming season, bee keepers can now sit down and thoroughly read the Bee Journals that they just skipped through during the busy season.

The writer has just been looking over the Review for the past year and I am surprised by the changes that have taken place and what The Review has done for the members of the National. It brings to my mind the thought, What would the possibilities of the National be for the coming year, if the membership was just double what it is at the present time, and it could be doubled, if every present member would make up his or her mind to enroll at the least one new name.

How many members are there who do not know at the least, one man or woman that keeps bees, whose name is not on the roster of the National.

Now boys, let us make it a long

pull, a strong pull and all pull together, we can get them if we go after them. Arm yourself with a few copies of the Review, go to your bee-keeping friend and ask him to join the National and State branch. If his name is Mr. Tightwad B Man, about the first question he will ask, is, "What do I get for my money?" Tell him that he gets his membership in the National and the State branch, and that he receives the Review twelve times a year. Show him how the National saves him money on his containers, both glass and tin, how it saves him money on stationery, foundation and other supplies, tell him how it will help him dispose of his crop, without cost to him. Perhaps he may be one of the class, that knows all about bees and does not need to read, then ask him if he could manage 3000 colonies, tell him about that Prince of Bee-keepers who is doing that little stunt and telling in the Review just how he does it, don't

forget that the Review is the only journal that publishes the series.

To create an interest in the campaign, would it not be a good idea for the National to offer a small prize to the Branch enrolling the largest number of new names during the year, let the prize be say a ballot box or a gavel, suitably engraved, then the Branch could offer a small prize to their best hustler.

At the end of the year have the

Review publish a list of the Branches and the number of names each one enrolled.

Should the membership not be doubled there would still be some consolation in the healing of that old song, "Every little bit added to what we have got—" helps some.

Hoping the above ideas may be acted on, or that they may draw out better suggestions from some more fertile brain.



First Iowa Summer Meeting

The first of the Iowa summer meetings was held at McGregor, Iowa on May 19th. The location chosen, at the Heights was a most pleasant one indeed, with abundant shade and a splendid view of the river for miles in each direction. About fifty were in attendance and the occasion was a most enjoyable one. A wreck on the railroad between McGregor and Dubuque prevented some from reaching the place and delayed others. A number came from forty to fifty miles and some from a much greater distance. The state inspectors from the three states of Wisconsin, Minnesota and Iowa were all in attendance and a discussion of bee diseases was the principal topic. Hon. N. E. France

was the principal speaker and his subject was "Control of Bee Diseases." Mr. France handled the subject in a thorough and interesting manner and we are hoping that he will be with us again. Mr. Homberg followed Mr. France and talked on matters of general interest to bee-keepers including some of his experiences in inspection work.

It was decided to hold a similar meeting at the same place again about the middle of next May to which the bee-keepers of the four nearby states of Wisconsin, Illinois Minnesota and Iowa will be invited.

FRANK C. PELLETT,
President.

The Hive and the Honeybee by L. L. Langstroth, 1853. Reprinted 1914.

The introduction is by the well-known bee-keepers, Mr. C. P. Dant and the reprint by the A. I. Root Co., Medina, Ohio.

Mr. Langstroth was a half century in advance of his time on subjects pertaining to the hive and the honeybee, an oily writer or rare exception. It makes one feel small to think that Mr. Langstroth knew practically all pertaining to our pursuit sixty years ago. It is a work

that should be in the library of every progressive bee-keeper. It can be furnished from this office at \$1.00 postpaid.

Editor Review:—I had a good big swarm issue yesterday, May 19th. the earliest on record with me. Fruit bloom is opening, with lots of dandelion, and prospects good for clover.

Yours truly,

H. E. GRAY,
Sec'y Adirondack Branch.

The Review Debt Subscription List

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we must have many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$ 91 75
F. D. Stephans, West Branch, Mich.....	1 00
F. W. Lesser, East Syracuse, N. Y.....	3 00
Patrick Flanagan, New Rochelle, N. Y.....	1 00
C. F. Smith, Cheboygan, Mich.....	1 00
E. A. Duax, Chippewa Falls, Wis.....	50
Jno. E. Roebling, Cincinnati, Ohio.....	1 00
N. O. Walker, Franklin, Tenn.....	1 00
C. W. Reber, Wildwood, Mich.....	50
J. W. Stine, Salem, Iowa Second donation.....	1 00
Dr. C. G. Luft & Son, Fremont, Ohio.....	1 00
E. M. Bendelow, 330 Linwood Ave., Detroit, Mich..	1 00
Eular Thorne, Leer, Mich.....	1 00
Joseph S. Scott, Mt. Pleasant, Ala.....	50
C. Stimpson, Holly, Colorado.....	1 00
David Roberts, Plymouth, Ind.....	1 00
Henry Dunker, Troy, N. Y.....	1 00
Mrs. Milton Sayres, Nyack, N. Y.....	50
H. E. Gray, Fort Edward, N. Y.....	50
George B. Larinan, Pasadena, Calif.....	1 00
Prof. J. H. Haughey, Berrien Springs, Mich.....	1 00
J. B. Meimann, Covington, Ky.....	1 00

Subscriptions to the Review debt are not coming as fast as we anticipated; still, we have at this writing \$112.25, the last month's contribution being the largest yet, which is very encouraging. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the August REVIEW. We feel proud of the above list. It is the largest one yet and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we should like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The members's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint

Wilmon Newel College Station, Tex.
Alfred L. Harlt, Elmendorf, Texas.

Raspberry

F. D. Stephens, Box 383, West Branch, Mich.

Alfalfa

A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Olathe, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.
C. Stimson, Route No. 1, Holly.

Amber

G. Frank Pease, Marshall, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Rcsc, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Guirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.
J. M. Cutts, R. 1, Montgomery, Ala.

Mesquite

Arizona Honey Exchange, Tampe, Arizona.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franks-ville, Wis.

Clover and Basswood Blend

Elias Fox, Union Center, Wis.
Dr. C. G. Luft, Fremont, Ohio.
Frank Kittinger, Caledonia, Wis.

White Clover

E. F. Smith, Chadwick, Ill.
B. F. Schmidt, North Buena Vista, Iowa.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co. Wis., No. 19.
Byron S. Hastings, Rt. 5, Brookville, Ind.
S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
Orville Safford, Fort Edwards, N. Y.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snyder Bros., Center Point, Iowa.
Dr. C. G. Luft & Son, Fremont, O.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, La Mars, Iowa.
A. S. Crotzer, Lena, Ill.
W. H. Pearson, Mitchellville, Iowa.
John S. Coe, Boyce, Va.
M. H. Lind, Baders, Ill.
Frank Kittinger, Caledonia, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prisk, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
Niels A. Nelson, Dike, Iowa.
Geo. E. Capwell, Cottonwood Falls, Kansas.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Charles Lotz, Monroe, Iowa.
Dell E. Berryman, 2308 20th ave., Central City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
Mangrove, White as Clover
A. F. Brown, Hawks Park, Fla.
Partridge Pea
J. J. Wilder, Cordele, Ga.
Buckwheat
Jas. McNeil, Hudson, N. Y.
E. A. Duax, Chippewa Falls, Wis.
Wilmer Clarke, Easville, N. Y.
Hwajilla
Frank Talbot, Pearsall, Texas.

Editor Review:— I intend to get a large honey extractor. Which would you recommend the 6 or 8 frame? I expect to run it by hand at the start but may get an engine later.

What do you thing about the Peterson capping melter? If it is not advisable to uncap into it, it might pay to melt the capping after they drain for a few days. I wasted about \$25.00 worth of honey this year because I had no means of getting it all out of the cappings.

Yours truly,
F. E. MATZKE.

(Friend Matzke:—It has been our experience that the larger the extractor the more work would be accomplished in a given time. With our system of working, we cannot very well use an extractor larger than the 4-frame size. We usually work a "gang" of three men during extracting time. Those three men will usually carry in, uncap and handle the honey about as fast as two 4-frame extractors would throw out the honey, so if one was in a position to have two helpers, other things being equal, would think the 8-frame size would be none too large. But say: You will need the engine from the start with an 8-frame size of extractor, the 4-frame being about the "limit" of hand power.

The Peterson capping melter is a fine thing, but not for what it was intended. We use the Townsend uncapping box, then after the honey is through draining from the capping, they are run through the Peterson melter. In this way of handling our honey we are sure of getting it in the very best possible shape, with aroma retained, than by melting the cappings later we get \$50 to \$75 worth of baker stock of honey each year, that used to be thrown out when rendering our wax, as you say you lost \$25 worth this year. With us the Peterson capping melter pays for itself about four times each year, and is good for many years' service. Bee-keepers who extract one thousand pounds of honey per year cannot afford to be without some kind of a capping melter, for they will lose more than the cost during a period of two years. Ed)

Bees

Michigan is notably a honey producing state. In 1910 bees were reported on 16,892 farms or 8.1 per cent of the whole number. There were 115,274 colonies, valued at \$446,464. In 1909 Michigan produced 2,507,810 pounds of honey and 28,524 pounds of wax, with a total valuation of \$296,742 (ranking second). Michigan's tree, crop, wild plant and weed growth is of a character eminently suited for honey production, furnishing an ever changing source of supply throughout the season.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the bee-keeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

SAGE HONEY—George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Five or six tons of amber and buckwheat extracted honey. HENRY J. ZINN, 1135 Wyo Ave., Forty Fort, Pa.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We are paying 34c per pound for nice bright yellow, clean beeswax. CHAS. ISRAEL BROTHERS CO., 486-490 Canal St., New York, Established in 1875.

WRITE US for prices on car lots of Fine Alfalfa Extracted honey to be delivered after July. Address MARTIN BROTHERS, Lander, Wyoming.

FOR SALE—Orange honey, 1914 crop. Packed in 60-lb. cans, 2 in a case, net weight. Price 9c per lb. Sample free. JAMES McKEE, 559 Grand ave., Riverside, Calif.

COMB HONEY wanted at all times. Also Potatoes, Onions Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind. tf

FOR SALE—Orange honey, new crops fancy quality both light amber and white. Put up in new 60 lb. cans, 120 bs. net weight to the case. Sample free. Wholesale price \$12.00 per case, f. o. b. Riverside. JAMES McKEE, Riverside, Calif.

BEEES AND QUEENS

FOR SALE—°00 colonies of bees, 8-frame hives, operated for comb honey. W. P. COLLINS, Boulder, Colo.

FOR SALE—One to 100 colonies bees in 10-frame hives. Any quantity to suit purchaser. Address L. E. Evans, Onsted, Mich.

FOR SALE—15 colonies Italian bees in Danz hives. Combs drawn on full sheet foundation. Write LEON MORRIS, Elizabethtown, Ind.

FOR SALE—Untested Italian queens, Howe stock. Guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price one 85c, six for \$4.50 \$8.00 per dozen. No foulbrood. D. G. LITTLE, Hartley, Iowa.

NORTHERN REARED Queens of Moores' strain of leather colored, three banded Italians after June 20. Untested \$1.00 each 6 for \$5.00, 12 for \$9.00. RAMER & GLUEN Harmony, Minn. tf

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c. E. E. MOTT, Glenwood, Mich.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

QUEENS by return mail or your money back. Guaranteed purely mated. J. E. Hand strain of 3 Banded Italians bred for gentle Honey gathering and wintering. State inspector's certificate. Select untested 1, 75c.; 6, \$4.; 12 \$7. Tested 1, \$1.; 6, \$5.; 12, \$9. Select tested 1, \$1.25; 6, \$7.; 12, \$13. Write for price on large orders. J. M. GINGELICH, Arthur, Ill.

WANTED—30 to 50 free from disease colonies of bees. Address J. A. PEARCE, Route No. 1, Grand Rapids, Mich.

GOLDEN ITALIAN QUEENS about June 1st. Tested \$1. Untested 75 cents each; dozen \$7.50. Satisfaction guaranteed. J. I. DANIELSON, Fairfield, Iowa, Route No. 7.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on nuclei for May delivery. We have Moore's strain of Leather colored Italians. OGDEN BEE AND HONEY CO. Ogden, Utah.

DON'T WORRY—Get your queens from Murry. Best 3-banded stock obtainable. Reared by latest scientific methods. No better honey-gatherers anywhere at any price. No foul brood or other disease. Tested, 1 for \$1.00; 6 for \$5.00. Untested, 1 for 70 cts., 6 for \$4.00. Bees by the pound. Write for prices. H. D. MURRY, Mathis, Texas.

FOR SALE—Three Banded Italian Queens, bred from the best honey gathering strains that are also hardy and gentle. Untested queens 75c; six \$4.25; 12, \$8.00; tested \$1.25; six \$7.00; 12, \$12.00. For select queens add 25c each to above prices. Breeding queens \$3.00 to \$5.00 each. For queens in larger quantities write for prices. ROBT. B. SPICER, Wharton, N. J.

QUEENS bred from Doolittle's best stock, untested 60c each, \$6.60 per doz., \$50 per 100. Same stock of one-year-old queens removed from our colonies to prevent swarming, 50c each, \$5.40 per doz., \$40 per 100. Delivery guaranteed. Nuclei, 2-frame, \$1.50; 3-frame, \$2.00. Add price of above queens wanted. We have a rare bargain of an apiary of several hundred colonies of bees for sale on easy terms. Particulars on request. SPENCER APIARIES CO., Nordhof, Cal.

Carniolans are excellent winterers, build up rapidly in the spring, are very prolific, cap their combs very white, enter supers readily, and keep their colonies strong at all times. Write for our FREE paper "Superiority of the Carniolan Bee," explaining more fully, giving briefly best systems of management. Untested queens, \$1.00 each; doz. \$9.00. 1 lb. package of bees without queen \$1.50, with queen \$2.50 in June.

ALBERT G. HANN, CLINTON, N. J.
Carniolan Queen-Breeder

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen.....	75
1 doz.....	\$7.20
4 doz. or more.....	50 cents each

J. H. HAUGHEY, Berrien Springs, Mich.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CO., Clintonville, Ct.

FOR EXCHANGE FOR QUEENS, or sell, 50 Alexander feeders, best make. Address F. D. STEPHENS, Box 383 West Branch, Mich.

YOUR NAME AND ADDRESS on 100 envelopes 30c; on 100 sheets writing paper 30c. All postpaid. PEARL CO., Clintonville, Conn.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR SALE—Flemish Giants Rabbits, 3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

WANTED—Reliable man of good habits to work with bees. State wages, age and experience first letter. The Rocky Mountain Bee Co. Forsyth, Montana. tf

FOR SALE—100 Heddon hives and fixtures to run a 100 colony apiary. Bargain to clear out. Address MRS. R. L. GRAY, Lapeer, Mich., R. F. D. 4, Tel. 246—R 11.

WANTED—Immediately a reliable man of good habits to work with bees. State age, experience and wages first letter. We furnish board. THE ROCKY MOUNTAIN BEE CO., Forsyth, Montana.

FOR SALE—Eight Little Wonder Bingham smokers at a closing out price of only 40c each, or two for 75c. Add postage for 2 pounds to go by mail. Address Mrs. W. Z. HUTCHINSON, Flint, Mich.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson, Mich.

FOR SALE—Two dozen mailing cases, bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Mich'gan.

HONEY

Finest White Clover Extracted Honey, in 10-pound friction top pails, 6 pails in a wooden shipping case, at only \$6.50 per case. Same, Amber at \$5.00 per case. All f. o. b. Kinde. Address

Woodhull Honey Co., Kinde, Mich.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1.00**

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Beginner's outfits and other supplies. Send for list. Address

ALISO APIARY CO.,
Glendale, California

HONEY COMB AND EXTRACTED

We can furnish both comb and extracted honey to bee-keepers who have run out of their own product. All our honey is strictly first class. Italian Bees and Queens in season. Write for prices.

LATSHAW HONEY CO.

Carlisle, Indiana



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Just put your name and address on a postal card and get my new Separator book free.

Saves \$35 to \$50

On the latest, most modern, most sanitary cream separator built. Gearing runs in a constant bath of oil and all enclosed, dust and dirt proof. Closest skimming, new type disc bowl. A lot of New Sanitary features not found on other makes. One-half the price of the old style, cumbersome machines selling through agents and dealers. Buy direct from factory and save big money. Got my new Catalog. A postal brings it.

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30 Days FREE Trial

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GET TOP NOTCH PRICES BY USING LEWIS SECTIONS AND SHIPPING CASES

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W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm, and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one, \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame \$3.50; six two-frame, \$20.40; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

See California

and her two great Expositions FOR ONE DOLLAR

California will hold next year two great universal Expositions, one at San Francisco and the other at San Diego, in celebration of the completion of the Panama Canal and the joining of the Atlantic and Pacific Oceans.

To supply the demand for reliable and authentic information on California and these two Expositions, we have published two guide books; one on San Francisco, the Exposition and Northern California; the other on Los Angeles, San Diego, the Exposition and Southern California, also a lithographed view of San Francisco in colors (size 30x45 inches) a picture of the rebuilt city, including the Exposition. Each book is 6x9 inches, contains 150 pages and beautiful illustrations.

These two books and view give a comprehensive, honest history and description of the State, her principal cities, resources and her two great Expositions. Sent postpaid for a one dollar bill, money order, draft or check. North American Press Association, 1438 Hearst Building, San Francisco.

Pure Food Law Now in Effect-- How it Effects the Producer

(Continued from page 248)

In general, solids must be stated in terms of weight and liquids in terms of volume, except that where there is a definite trade custom otherwise any marking of the package in terms that are generally understood to express definite quantities will be permitted. The quantity of viscous or semi-solid food or of mixtures of solids and liquids.

(Chunk Comb Honey.—Ed.) may be stated either by weight or measure, but the statement must clearly indicate whether the quantity is expressed in terms of weight or measure.

In the case of certain articles the contents may be stated by numerical count, provided such numerical count gives accurate information as to the quantity of food in the package.

(A case of 24-13 oz. net weight sections would suffice, providing it was sold direct to the consumer in original package. Ed). Under this requirement it would not be enough to state that a package of candy contained 24 craem peppermints, as candies vary in size and this would not be a statement of the actual quantity of candy in the package.

The regulations also permit the statement of minimum volume or weight, as "Minimum weight, 12 ounces;" "Minimum volume, 1 gallon;" "Not less than 4 ounces." In such cases the amount stated must approximate the actual quantity. No variations below the stated quantity will be permitted.

The statement of weight or measure must be marked in terms of the largest unit contained in the package; for example, if the package contains a pound and a fraction, the contents must be expressed in terms of pounds and fractions thereof, or pounds and ounces, and not merely in ounces.

Tolerances

In the packing and bottling of many foods it would be impossible or else add unnecessarily to cost, for the manufacturer to place an absolutely accurate statement of the amount of the food in every package, and for this reason the regula-

tions permit tolerances or variations in packages where the discrepancies are due exclusively to unavoidable errors in weighing, measuring, or counting which occur in packing errors in weighing, measuring, or conducted in compliance with good commercial practice. This tolerance is allowed in order to permit the use of weighing and measuring machines which, like human operators, cannot weigh or measure with absolute accuracy every package. The regulations, however, provide that a run of such packages must show as many cases of overweight and as much excess as it does cases of underweight or under-volume.

Similarly in the case of bottles, which can not be blown with absolute accuracy, tolerances are allowed, but with the same proviso that the run of bottles must show as much excess in volume as deficiency in volume. Queer-shaped bottles must not show greater discrepancies than standard round or square bottles of the same capacity. This means that a manufacturer who uses some special bottle of odd shape cannot claim a greater variation because of the difficulty of blowing or manufacturing such a bottle or container.

Because goods shipped from one part of the country to another lose in weight by natural evaporation due to differences of atmospheric conditions or temperature, tolerances will be allowed for such changes. The proper tolerances to be allowed will be determined on the facts in each case, and it is probable that the department will establish tolerances for evaporation for various foods.

Packages containing 2 ounces avoirdupois or 1 fluid ounce of food or less are considered small and are exempted from marking in terms of weight. The reason for this is that providing accurate small bottles and accurately measuring their contents in the case of a number of articles sold in small packages for 5 or 10 cents would be prohibitive in cost to the manufacturers and would force them to raise the price for the package or to put less food in it for the same price.

In answering advertisements in the REVIEW, kindly say I saw your advertisement in the Bee-Keepers' Review.

....The....

Canadian Horticulturist and Bee-Keeper

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Canada

It is the official organ of the Ontario Bee-Keepers' Association and has incorporated with it the former Canadian Bee Journal.

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Queens of Moore's Strain of Italians

PRODUCE WORKERS

With honey nice and quick.
That fill the supers quick.

They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc. Untested queens, \$1; six, \$5; 12, \$9. Select untested, \$1.25; six, \$6; 12 \$11. I now have 750 nuclei and am filling orders by return mail. Safe arrival and satisfaction guaranteed. Circular free.

J. P. MOORE,

Queen-breeder,

Route 1, Morgan, Ky.

QUEENS

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Bees by the pound and full colonies

From a superior strain of **THREE-BANDED ITALIANS**. Hardy, gentle, and they are hustlers. Guaranteed to please you.

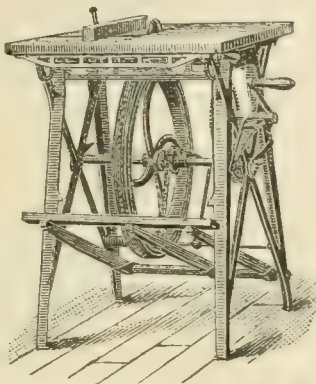
Send for my 1914 descriptive catalog.

I have a large stock of modern **BEE SUPPLIES** always on hand. **ROOT'S GOODS** at factory schedule of prices packed and delivered to my station. All orders will receive prompt and careful attention.

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Bee-Keepers will save money by using our **FOOT POWER**

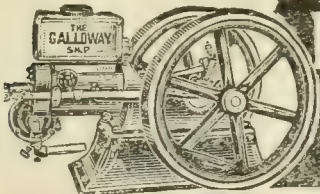
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in making their hives, sections and boxes. Machine on trial. **SEND FOR CATALOGUE.**

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Let Me Ship You This Great 5 H.P. Galloway Stationary Engine - Only 99.50

Galloway Engines Are Made in Sizes from 1 3-4 to 15 H. P. Twenty-Four Different Models

Yes Sir! Try It 30 Days on Your Own Farm at My Risk

It's got to please you entirely or it won't cost you one cent. My guarantee is printed in black and white and says "Satisfaction or your money back" with all the freight charges paid. Galloway engines are high quality engines selling at the lowest price ever made. Five years ago when I came out with my engines, dealers were asking \$250 to \$300 for inferior 5 h. p. engines. I've made them come down in price, but today they can't anywhere near meet my new prices. Get my catalog and see the proof.

My Direct from Factory Plan Saves You \$50 to \$300

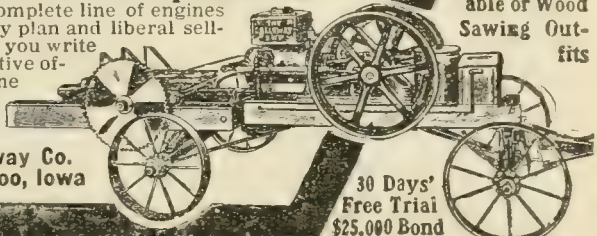
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THE BEEWARE BRAND MEANS SUCCESS INSURANCE

Send for Annual Catalog which will tell you who is your nearest Distributor. G. B. Lewis Company, Watertown, Wis.

Three Thousand Colonies in Fifty Yards

By J. J. Wilder, Cordele, Ga.

(Continued from page 245)

We made a "flying" trip around to the bees again cleaning off the yards to avoid the possibility of losses by forest fires. Then we rushed back home again for another work, the task of setting up supplies, etc., and during the stay there the yards were all visited again and straightened up, etc. The hives were on stands about 8 inches high, which stands were to be used after the bees were transferred into modern hives.

These yards consisted of such a conglomeration of hives made in every conceivable shape, a curiosity shop to every inquiring mind, and such a sight not many bee-keepers have ever seen.

The badly decayed hives were completely wrapped up in burlap sacks for moving, not loosely but as closely as possible and the folding tacked down to the hive by means of nails driven through slats so as not to allow any bees to escape. The better hives were prepared for moving by placing a piece of burlap sack over the mouth and up the sides six or eight inches, then on either side a strip of lath tacked down over it as long as hives were wide. This kept the bees from escaping from about the mouth of the "gums" and the tops were stopped up well with the same material and well nailed. These were loaded mostly on their sides on wagons and fastened on with ropes to avoid all possible danger of a hive falling off. Only a single thickness of the sacks was used so as to allow plenty of ventilation.

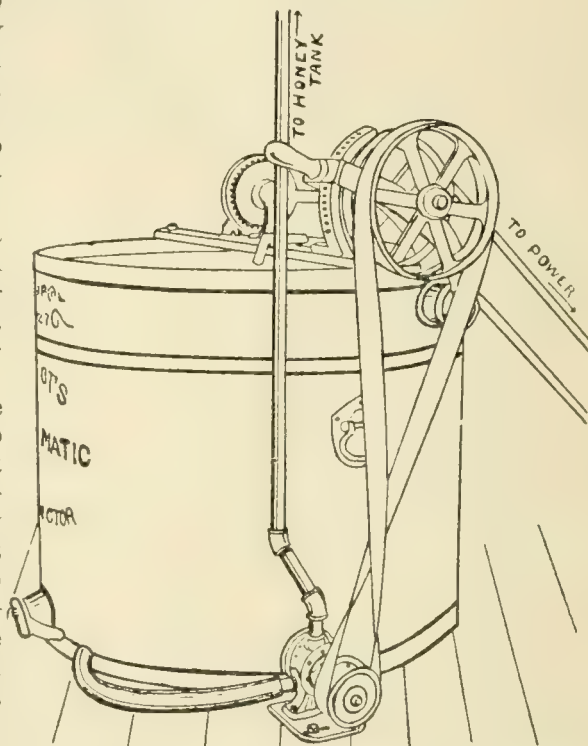
From early morning until late at night the work of setting up the needed supplies was pushed and a large amount of the task done at the end of the month when we returned home.

It helps a magazine wonderfully if you will say I saw your advertisement in the Review when writing our advertisers.

You are invited to become a National Member.

Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP** then run them with a **NATIONAL 1½ H. P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and every-



Root Automatic Extractor, showing Honey Pump in Position

thing necessary pertaining to the outfit, at \$84.00.

Six-frame extractor outfit as above at \$92.00. Eight-frame extractor outfit as above at \$99.00. Without honey pump, deduct \$17.50. The engine shipped from Wisconsin and the balance of the outfit from Medina, Ohio. The National will take the money you hand us and buy the above outfit. Directly from the manufacturer at our one small profit system, on the co-operative plan. Address with remittance.

**National Bee-Keepers'
Association**

Northstar, Michigan

E. D. Townsend & Sons

Northstar, Michigan

**Producers of a superior quality of White Clover
Extracted Honey**

10 Yards

Nearly 1000 Colonies

Our White clover extracted honey is gathered from the old, well cleared farming country of Gratiot County, where but little foreign matter is stored with the clover, so we can offer a honey of almost clear White Clover of excellent quality. Put up as fast as extracted, thus retaining nearly all the volatile oils, thus retaining that beautiful aroma and bouquet so very desirable in table honey.

As usual, we will select some of the very best and whitest of this superior stock, put it into new 60 lb. net tin cans, deliver it to our station here for an even \$12 per case, containing two cans, 120 lbs. net. A liberal sample free.

Address with remittance

E. D. TOWNSEND & SONS,
NORTHSTAR, MICHIGAN

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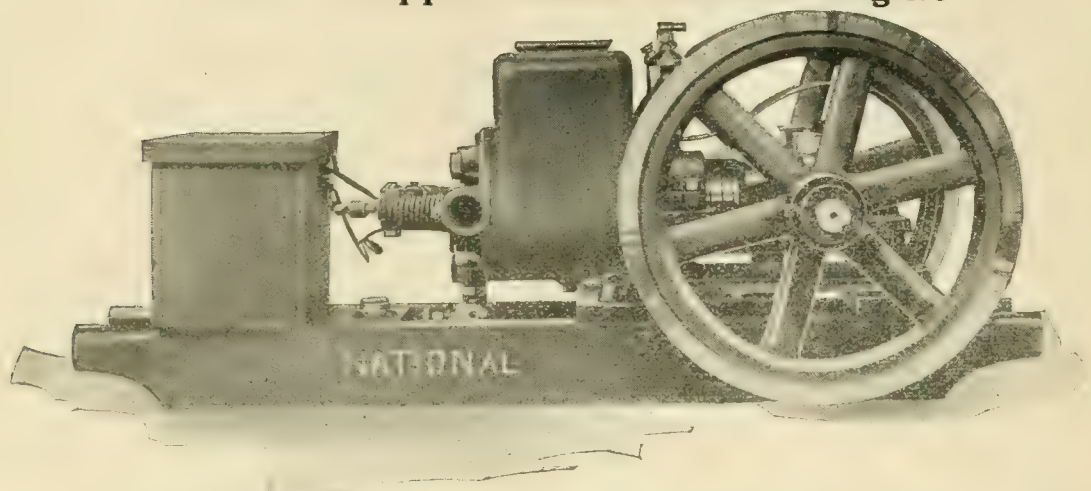
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1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

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The Fly Wheels—Smooth running in an engine, especially on truck, depends

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Horse power, $1\frac{1}{2}$; bore, $3\frac{3}{4}$; stroke, $4\frac{1}{2}$; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, $1\frac{1}{4}$; floor space, 9x36; shipping weight 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

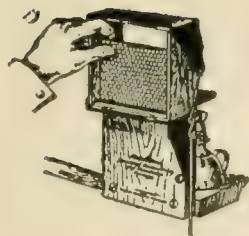
Price \$32.50, Co-operative.

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Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," or cut without reading for their letter heads, envelopes or circulars can be furnished with them for 50c each, postpaid. Address

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The best honey-gatherers.

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Extra Breeding Queens, selected, \$2.00; Fertilized, \$1.50. Lower prices per dozen, or for more Queens. Safe arrival guaranteed. Write.

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DADANT & SONS

Hamilton, Ill.

Honey! Honey! Honey!

Members having more Honey than they have sale for, will kindly mail a liberal sample to this office, stating quality you have, style of package, and the price you have been getting for it during the last two years. This price you mention need not necessarily be the price it will sell for this season, but will give me a key to go by in establishing a price for this year. If you have a car load of honey, or you and your neighbors can club together and make up a car between you, this would be the proper thing to do, as a considerable reduction in freight can be saved by shipping in car lots over local shipments.

Honey Buyers Honey Buyers

Those wanting to buy honey in car lots or less, kindly write your wants to this office, stating kind and quality you can use.

We can furnish Sage and Alfalfa in car lots, and likely Clover. Write your wants and we will see that they are supplied if possible.

Address

National Bee-Keepers' Association
Northstar, Michigan

Fill Out this Crop Report Blank at Once

AND SEND IT TO

The National Bee-Keepers' Association
Northstar, Michigan

All subscribers to the REVIEW as well as all members to the "National" are asked to fill out and send in this report. It will be the only way that we can give you definite facts concerning the honey crop, and thus arm you with the information you must have to be able to intelligently set a price upon your honey crop this year.

Name.....

STATE..... County.....

Number of colonies did you begin the season of 1912 with?.....

1913 with?.....; 1914 with?.....

Number of pounds of comb honey did you produce in 1912?.....

in 1913?.....; in 1914?.....

Number of pounds of extracted honey did you produce in 1912?.....

in 1913?.....; in 1914?.....

Approximately how many pounds of comb honey was produced in your immediate locality during 1912?.....; during 1913?.....

during 1914?.....

Approximately how many pounds of extracted honey was produced in your immediate locality during the season of 1912?.....; during 1913?.....

.....; during 1914?.....

From what source is your 1914 crop gathered?.....

What per cent do you ship to a distant market?.....

How is your honey put up for market?.....

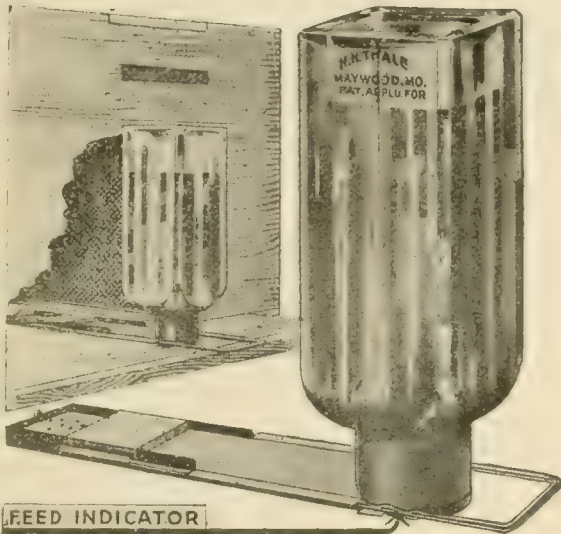
If the friends will co-operate with us send in the above information as soon as the season is over, we will then be in shape to decide on a price comparative to the last two seasons, and thus will not be in the dark about the proper price to ask for our hard-earned product.

Kindly do not fail to compare this year's crop with that of the two previous seasons, for if you should your report would lose half its value.

Address

THE BEE-KEEPERS' REVIEW
NORTHSTAR, MICHIGAN

Thale's Regulative Vacuum Bee Feeder



Thale's Regulative Vacuum Bee-Feeder is the best by test. Arrangements have been made with the leading dealers and bee supply manufacturers to catalog and sell this feeder for 1915.

May 7th, 1914
Watertown, Wis.

Mr. H. H. Thale,
Maywood, Mo.

Dear Sir:—Referring to your Bee Feeder and the test Mr. Kenneth Hawkins made for us, we are herewith enclosing copy of his report just received and which will undoubtedly be of interest to you. We have now made note to list this feeder in our 1915 Bee Supply catalog and will place our order for feeders in due time.

Yours truly,
G. B. LEWIS CO.

Plainfield, Ill.
May 4th, 1914

G. B. Lewis Co.,
Watertown, Wis.

Dear Sir:—In referring to comparative tests of bee feeders in my opinion there is no better feeder for stimulative feeding or for the queen breeder than Thale's Regulative Vacuum Bee Feeder. It is better than the Boardman in that the bees can always take the syrup, even in coldest weather. They took feed

here with the temperature at 22 degrees at night. There is no comparison between the Thale and Boardman or division board feeder, owing to the ease with which one may control the flow. It is better than the Alexander for the same reason, and that it doesn't make a nuisance fastened to the hive. The Miller Feeder will always be the best fall feeder for handling large lots of syrup, I believe, but the Thale may be fed so as to empty in 12 hours, I have found, and that threatens to outgrow the Miller owing to the ease of operation and lack of bothersome equipment.

The value of stimulative feeding is already known and within 24 hours after feeding with the Thale I had eggs in every cell that the bees could cover here with the temperature below freezing. This with pollen from the maples. Altogether I recommend the Thale feeder as being the best feeder I have ever used for stimulative feeding.

KENNETH HAWKINS,
Breeder of
Quality Hill Queens.

Bee-keepers can buy these feeders from G. B. Lewis Company, Watertown, Wis., and their thirty distributing houses; Minnesota Bee Supply Co., Minneapolis, Minn.; Leahy Mfg. Co., Higginsville, Mo.; Earl M. Nichols, Lycnsville, Mass.; B. H. Masters, Edison, Ohio and Harry W. Martin, New Holland, Pa. I want every dealer and manufacturer of Bee Supplies to handle these feeders next season. Write for jobbers' prices. Buy these feeders from your nearest dealer in 1915.

H. H. THALE, Inventor and Manufacturer
Box R 25, Maywood, Mo.

Friction Top Honey Pails and Cans



The Friction Top honey pail is the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx. Capacity	Per 100 Lots of 50	Per 100 Lots of 100	Per 100 Lots of 500	Per 1000 Lots of 1000
2 lb. Can.....		\$2.25	\$2.15	\$20.00
2 ½ lb. Can.....		2.75	2.60	24.00
3 lb. Can.....		3.00	2.85	28.00
5 lb. Pail.....	\$5.00	4.75	4.50	42.50
6 lb. Pail.....	5.25	5.00	4.75	45.00
10 lb. Pail.....	7.00	6.50	6.25	60.00
12 lb. Pail.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2 ½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

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Northstar, Michigan

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SQUARE
1 gallon, 100 to
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60-POUND ROUND JACKETED 3-INCH SCREW

Price in lots of 25 39 cents each

Price in lots of 100 36½ cents each

Price in lots of 250 36 cents each

SPENCER FRICTION TOP CANS PATENTED



Approx Capacity	Per 100 In 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots
2 lb. Can	..	\$2.25	\$2.15	\$20.00
2½ lb. Can	..	2.75	2.60	24.00
3 lb. Can	..	3.00	2.85	28.00
5 lb. Pail	\$5.	4.75	4.50	42.50
10 lb. Pail	7.	6.50	6.25	60.00

or over

60-POUND SQUARE

One in a case, Price 32c per case
Two in a case, Price 60c per case

Special prices quoted for carload quantities

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147 West 14th St.

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Gleanings in Bee Culture

== FOR 1914 ==

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake bee-keeper whether he has but one colony, a small suburban apiary or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT—

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES—

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET

REPORTS—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt Texas, Colorado, Idaho and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1 — WINTERING—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14 which experiments will be published in this number. We shall also give our own experience summed up as to feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you cannot afford to miss such a wealth of information as the subscription price, \$1.00 will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly

AUG.
1914

NORTHSTAR,
MICHIGAN



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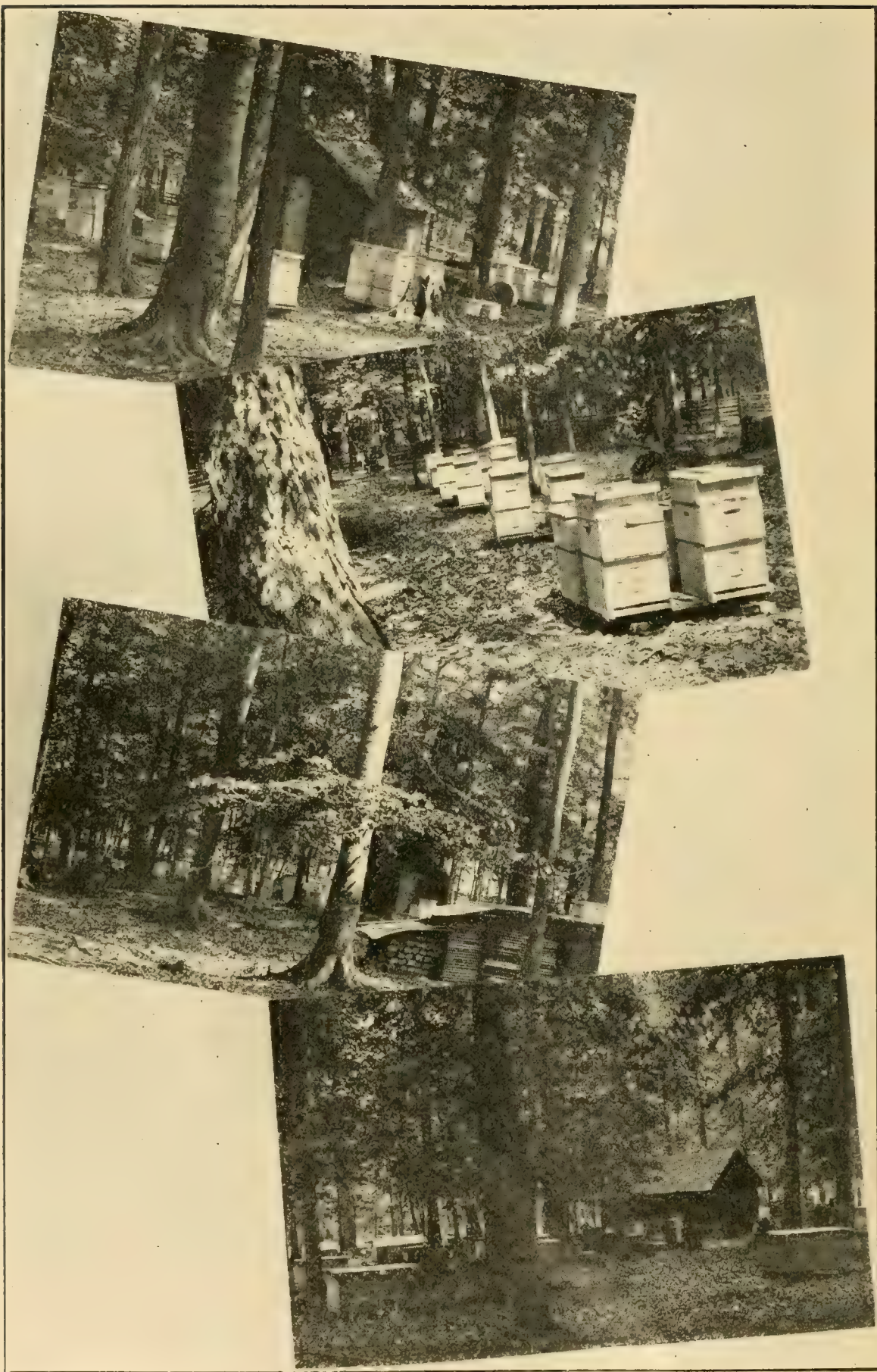
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The Swift Yard. One of ten owned and operated by E. D. Townsend & Sons, Northstar, Michigan. See Editorial

The Bee Keepers' Review.



Established in 1888 by the late
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OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo. PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9 1913, at the postoffice at Northstar, Michigan, under the Act of March 3, 1879.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII

NORTHSTAR, MICHIGAN, AUGUST 1, 1914 No. 8

The Temperature of the Honey-Bee Cluster in Winter

By E. F. PHILLIPS, Ph. D.,

*In Charge of Bee Culture Investigations, and George S. Demuth
Apicultural Assistant.*

The effect of confinement and the accumulation of Feces.

Before beginning a discussion of the effect of confinement and the accumulation of feces, it may be recalled that during the active summer season the length of life of worker bees is in a sense determined by the work done by them, rather than by days or weeks. The greater the necessity for excessive activity the shorter the term of life. The authors believe that they have evidence to prove that this applies to the winter also, and this belief is entirely supported by the experience of beekeepers

everywhere. That bees may come out of winter quarters strong in numbers and vitality it follows that the work to be done by the bees in the winter should be reduced to a minimum; and the winter problem, as thus interpreted, is therefore to find the conditions under which broodless bees do the least work. The work which broodless bees do in winter consists, so far as has been determined, solely in the production of heat or in activity incident to flying on warm days (if free to fly), and therefore the problem, so far as it is under the control of the beekeeper, is primarily to obviate the necessity for the production of heat. If brood is reared the work of the bees is necessarily enormously increased, and their vitality is correspondingly decreased. So far as evidence is

available in this work, the colony is not fully recompensed for this expenditure of energy by an increase in the strength of the colony by bees thus reared.

The colonies¹ to be discussed under this heading (Nos. 1 and 3) were wintered in the constant-temperature room in special 6-frame hives (to economize space and concentrate the colony so that fewer thermometers would be required) with full entrances and were not propolized or sealed at the top. During the regular series of readings the room was kept at a temperature which rarely dropped below 40° F. or went above 45° F., and the average temperature from October 14 to March 6 was 42.67° F. This temperature was chosen as being nearly the one usually considered best by beekeepers. The foods given these colonies were stored in the combs, just as placed by the bees. There was some pollen available in colony No. 1. (Fig. 2.)

According to what has been said in the previous section, we should expect bees at such a temperature to maintain a compact cluster and to generate some heat at all times. This was actually the case, the temperature of the interior of the clusters dropping below 64° F. only a few times in either colony.

Colony No. 1, on honey stores, was in the constant-temperature room from October 12, 1912, to March 24, 1913, or 163 days.² It was then removed for a flight and put back the same evening, where it remained until March 28. From March 7 at 9 a. m. until March 28 at 4 p. m. readings were made on this colony every 15 minutes night and

day, with the exception of the period between 9 a. m. and 7 p. m. on the 24th, when it was out of doors. During this period of three weeks the temperature of the room was changed slowly, being raised as high as 64° F. and cooled to 13° F.

When this colony was first placed in the room for the regular series of readings, after a preliminary confinement, October 12 (the readings were begun Monday, Oct. 14), it maintained a cluster temperature which usually lay between 64° and 68° F., the daily average temperature departing from these rather narrow limits only four times up to November 22. The average temperature is 66.5° F. During the first five weeks the temperature of the room was less regular than later (due to faulty working of the regulating apparatus), and this doubtless accounts for some irregularities in the cluster temperature. At first the three thermometers in the cluster (1, 2, and 5) gave temperature readings quite close together, while thermometer 6, which was near the cluster, gave readings intermediate between the three thermometers of the cluster and the four others in the hive, farther from the cluster. After November 22 the records of the thermometers in the cluster were more widely separated and the temperature of the center of the cluster (shown on thermometer 5) tended to rise gradually. It varied constantly but by December 7 and from then until the end of the month, it averaged between 69° and 75° F. On November 29 and December 12 the cluster temperature rose to over 88° F. From the 1st of January until March 6, which ended the regular series of readings, the cluster temperature became more and more irregular, and on January 20 the cluster moved (probably to accommodate itself to the stores) until thermometer 2 was nearer the center and showed a higher temperature than thermometer 5. The size of the cluster was gradually decreased by the death of bees, and all the thermometers except 2 and 6 show a gradual decrease in temperature until finally, from about February 25 to March 6, they are all low and of nearly equal temperature. The two ther-

1 In order that the young bees might all get a flight before the winter confinement, the two colonies here discussed were placed in the constant temperature room after the brood had been removed. They were kept here several days, removed for a flight, and then returned to the room for the regular series. The significance of this manipulation must be reserved for a later discussion. This explanation is made to show how it was possible to put these colonies in the room so early in a climate as mild as that at Philadelphia. The object was, of course, to increase the time available for observation. Bees are usually not wintered in cellars in climates as mild as that of Philadelphia.

2 In all, 24,077 temperature records were made for this colony.

monometers giving high readings continued to show in general a higher and higher average temperature and to become more irregular (except from February 15 to March 1), the periods of increased heat becoming more frequent. There was absolutely no regularity in these intervals. After February 1 the temperature of the cluster varied between 75° and 91° F., the average from February 1 being 85.4° F.

which cooled the room was then shut off and the temperature of the room rose very slowly and regularly, until on March 11 at 8:45 a. m. it was 64° F. For the first day the temperature of the cluster was slightly variable, and at 10:45 p. m. thermometer 6, which had been cooler than thermometer 2, showed a rise in temperature (probably due to a shifting of the cluster), and from then on to the 24th they were nearly of the same

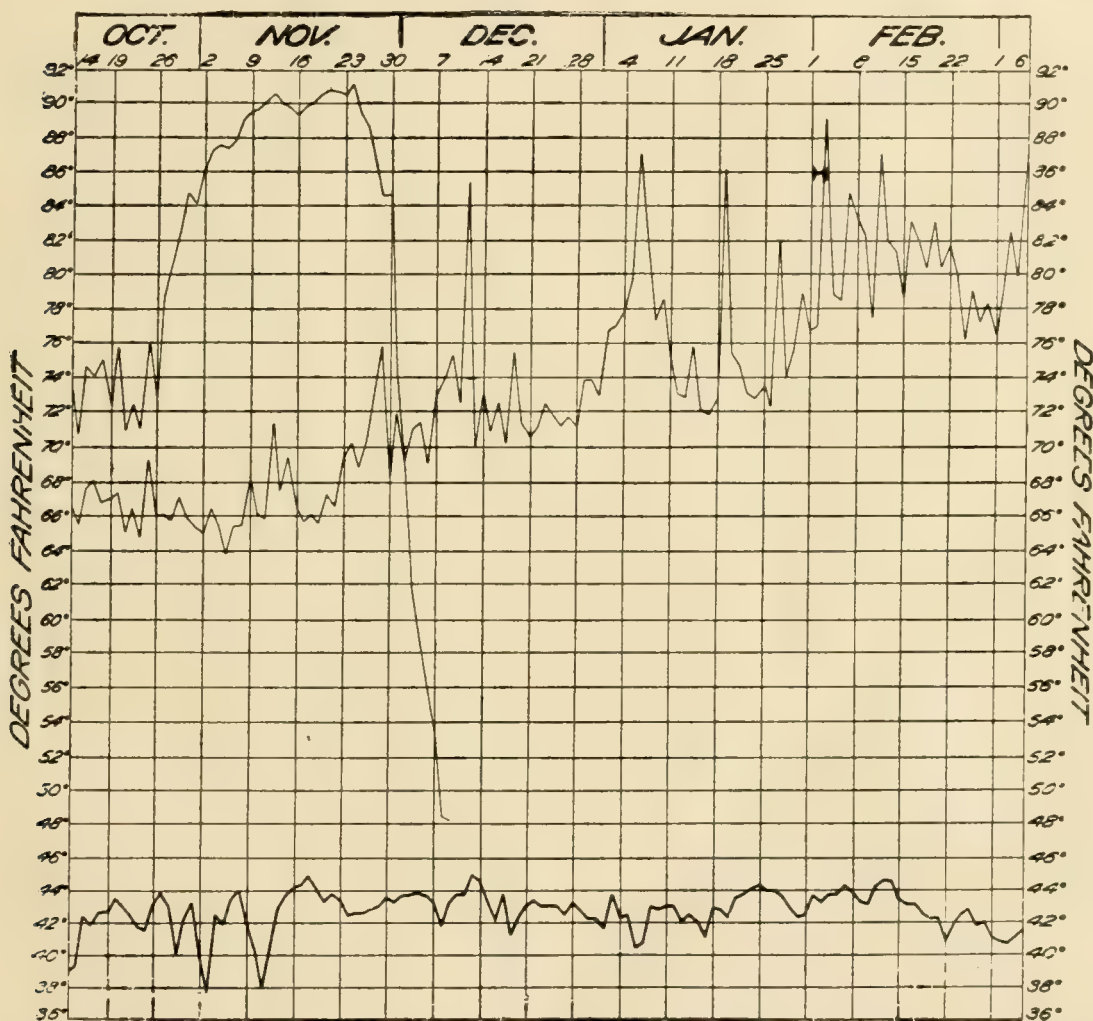


FIG. 2.—Average daily temperatures of the center of the cluster of bees in colonies 1 and 3 and room temperatures, Oct. 14, 1912, to Mar. 6, 1913. Taken from readings made hourly from 9 a. m. to 4 p. m. The room temperatures are indicated by the heavy line.

On March 6 all colonies in the constant-temperature room except two were removed. The colony described above (No. 1) and one other (No. 12), not to be described at present, were left. On March 7 at 9 a. m. the temperature of the room stood at 42° F., and the temperature of the interior of the cluster was about 84° F. The brine

temperature at all times. On March 8, at 3 a. m. thermometer 2 rose to 87° F. (room temperature, 48.5° F., having previously shown a cooling. The cluster temperature then dropped slightly, showing relatively little variation until at 4:15 p. m., March 9, it stood at 77.3° F. (room temperature 55.7° F.) As the room

(Continued on page 312)

The Cause of Swarming and Swarm Control

By J. A. PEARCE,

Author of the Pearce Method of Bee Keeping

It is very probable that the cause of Swarming, and its control is not very well understood by many of our bee-keepers, and I feel sure that these two things are of greater importance than almost anything else in our pursuit for so many other things are effected by them. For it would seem as if on these (hang all the low and the prospect) of bee-keeping. It is generally supposed that swarming is the natural and legitimate way of increase for the Bee family, and therefore it is not much use to try to prevent it or find out the cause.

But it has been noticed that usually when there is a big sudden honey flow there is a spell of excessive swarming and therefore these two conditions seem to be in some way connected. So then bees do not swarm at all times alike as might be expected if they were just fulfilling the law of increase to perpetuate the race. It also has been observed that when bees swarm about all available space in the hive is filled up. It does not necessarily follow that all the combs are wholly filled or sealed up for as soon as ever so little honey is placed in the cells they are of no more use for the queen to deposit eggs in until this honey is moved. Then if a sudden large honey flow comes on and all available space in the hive is filled there is nothing for the bees to do but start queen cells and swarm out as there is no place for the queen to deposit eggs. Bees will not cease gathering honey for any cause if any is to be had and if there is a goodly number of bees in a hive and a large honey flow comes on and the queen depositing one to two thousand eggs in a day with pollen being brought in to feed the bees, it is only a question of a very short time till there will not be an available cell left for the queen to deposit eggs in and then swarming is inevitable as the only way to make more space for the queen to

deposit eggs whether we want swarming or not. Therefore, it seems as if there being no more space available in the hive for the queen to deposit eggs in is the prime cause of swarming.

If this is so it would be an unwise thing for a bee-keeper to not provide a queen with adequate space to deposit all the eggs she is capable of, especially in early spring when a big stock of bees are so essential. It is no use raising bees after the harvest is over or too late to be available for work when the harvest comes. It is said that no bee carries in more than a spoonful of honey in her life time. If so it is only by securing a great number of bees early that we can be assured a large honey crop. Several different ways have been adopted to give the queens more room.

Our Veteran Bee Keeper Alexander used to extract from the brood chamber in the spring to give his queen room and feed back as needed. But this was a great deal of trouble and would not fill the bill as a very prolific queen might soon overflow a small hive with eggs alone. Then others run for extracted honey and extract from the surplus cases in order to give more room. But this is not much use if the brood chamber is too small and unless the queen is allowed to go above, swarming is liable to occur. None of us wants swarming as early as fruit bloom, it is an intolerable nuisance. A large bee-keeper a number of years ago, I do not now remember his name, said if he "could only control this everlasting swarming he would surely have a great thing." Many devices at different times by different men have been gotten up to prevent swarming but nearly all have failed and did not provide for the making of increase artificially if increase is needed. Therefore it seems almost certain that the great cause of swarming is the queen becoming hampered by inadequate

space to deposit eggs in spring. Then if this is the cause, what is the remedy? Everything points to a larger brood chamber. More and more I feel sure bee-keepers are making up their minds to this. When we look at the little straw hives used in Germany and other countries we see clearly that our fore fathers did not realize the capacity needed for their bees, why a good swarm such as we now have in our large hives would fill one of these little hives in two days on a good honey run and have to swarm out. To prevent this, we use and advise a very much larger brood chamber and find that two of these hives that we formerly used is none too large to hold an adequate winter supply of honey and is just as much needed to hold all the brood a good queen can supply up to the honey harvest. And surely it would be the height of folly to not supply the queen with all the needed room at such an important season. And then we find it is the whole thing to prevent natural swarming not one of all these 200 hives here have swarmed this year to my knowledge and I believe I would know of it if they had. It has not been as bad a year for swarming as last year but a lot of fellows have had to chase

around after swarms and climb trees. All of this might have been spared by just putting another hive body on the one the bees were in about the first of May and then putting on some honey cases early so the bees could carry the honey up out of this big brood nest to give the queen room and go about your business till you take off your honey. If you want increase, you can have it by setting these hives apart and putting two more hives on these, one on each and a queen in the queenless one. As both our hives used are alike and interchangeable 8 frames dovetailed hives and both bodies boiling over with bees no loss from absending or other cause, no climbing trees as these large hives, control swarming naturally and give us the stuff and save us untold labor and annoyance and enable us to get unlimited quantities of comb honey of the highest quality a most valuable thing as the production of comb honey is most desirable in so many ways. It is clean, it is nearly double in price, and honey in the comb is by far better flavored than extracted honey, and farther its production should greatly assist us in eliminating foulbrood.

EDITORIAL CORNER

The Mangrove buds are showing up well, and if meteorological conditions are "fit" the yield will soon begin. When Mangrove does yield well, a bee can get a load from a single blossom. As the trees (or high bushes) grow only on islands in the salt water (or close to the edge of the salt sea) the bees have to pass in flight across areas water-covered in order to reach the bloom. On windy days many bees are drowned in the water and the hives must be kept very full of bees to sustain the constant drain on its numbers, due to the depletion from drowning bees. It is possible on windy days to see hundreds of bees floating in the water, between the main land and the mangrove.—E. G. B.

A Wonderful Swarming Season

We never had so many colonies prepare to swarm during the clover flow in June before. Weather conditions were such that but little honey was coming in during June, excepting about enough to cause brood rearing. Comb space did not stop swarming preparations, the consequence was, we had to go over our entire ten yards once a week and shake those swarms that were building queen cells, otherwise we would not have had many workers to gather honey when it came, as we do not keep a man at each yard to hive swarms. Each year new conditions confront the honey producer and one must always be ready to meet the changed conditions.

For our frontispiece this month we are showing four views of one of our ten bee yards. The yard is known as the Swift yard, named after the party who owns the woodlot they occupy. It is our nearer yard to Northstar, being two miles out in the country, Number one reading from the top is a nearer view of the honey house, showing a portion of the colonies in the yard. Number two "Woodland Avenue" is the south row of hives in the Swift yard, and gives one a very good idea of how the yard looks at close range. It will be noticed that the hives are grouped in fours, on a platform the size of our winter cases. This platform serves as a summer stand for the bees and the bottom of the winter case during winter. Number three is a view of the east side of the yard, showing the winter cases piled up in the foreground during summer. The cases are built in sections, and are just "tacked" together at the corners during winter, and are knocked down during summer and covered with the metal covers. At the extreme right, on top of the pile of cases will be noticed a decoy hive. Once in a while swarms are caught this way. Number four shows the yard as it appears in winter. Don't they look comfortable—packed up snug, four together with five inches of paking at the sides and eight on top! Then there is the "outside protection" afforded by the woods. This is as essential as the packing. The photos were made by the Editor.

In shaking swarms on foundation in the production of extracted honey, one must be careful to not give too much comb room above, or the brood nest will be abandoned, and the colony left queenless at the end of the season. With a large prime swarm, we had best success by hiving on two sets of foundation, with an excluder between, the lower one the brood nest and the upper one the surplus department. With a moderate sized prime swarm, one story, the brood nest is given them for one week, when they will be well enough established so they will not neglect their brood nest, and a super of combs can be given.

Organization

Why is it that a State so unique and as well so important in the Apicultural field as our fair Florida should be utterly without organization among her bee-keepers?

Several years ago I wrote to Mr. O. O. Poppleton and Mr. E. B. Rood on the lack of a State Beekeepers' Association. They as well as others since, have expressed themselves as follows:—"The bee-men of Florida are too isolated, the distances too great in proportion to the numbers engaged in the business, to make a State wide Association feasible, heretofore.

It has been true, also, that bee culture was carried on in Florida almost exclusively by specialists, a comparatively few large producers in widely separated sections of the state. Moreover, some of these specialists were bee-men who swooped down from the tier of States to the North and dipped into Florida for a part of their crop, though really considering some other state their own home center. Such men naturally would feel little interest in a State organization for Florida.

In other words, the number was small of those who called Florida their home, who loved her as their own, for herself and for what she was, who expected to live and die within her borders, who intended to identify themselves with her and her development. How COULD a State organization find root in such a soil?

But a change is coming, is even now in evidence. There is an increasingly large number of householders and home-builders in Florida who are becoming interested in bee culture and who are making bees a more and more important side issue, a profitable avocation. Many of such, in the past two years, have expressed surprise verbally and in letter, that Florida has no association, local or State, among her bee-men.

Apropos of the same thought coincident with our own wishes, comes a letter from one who has long been a lover of bees, as well as a lover of Florida, a letter which we here append, since it speaks for itself:—

Mr. E. G. Baldwin.

Dear Sir:—I have a letter from the A. I. Root Co. I had been talking with our Board of Trade at Tarpon Springs, Fla., and some prominent citizens about having a Bee-keepers' convention at Tarpon Springs. They thought it should be held just before the holidays, and should consider the subject of a Florida Bee-Keepers' Association. I think it is practicable to organize. I am past 76 years old, and am not able to do much, but I will do what I can towards making it a success. I should think we could have papers enough to keep a convention for two days. Please write me what you think about it. I can secure a room, to hold the convention in, free.

Yours truly,
JAMES C. TETER.

A letter from Editor Root accompanied the above letter, assuring us of his hearty sympathy in any genuine movement toward organization, generously offering the columns of "Gleanings" to aid in effecting a Florida State Association.

Beemen, of Florida, and adjoining States as well, have we not been long enough without a State association? Is not the time ripe for concerted action? Surely a state producing six such choice table honeys as Tupelo, Orange, Mangrove, Pennyroyal and the two Palmettos needs an Association. Let all beemen of the state keep this matter under consideration, when Fall comes, let us decide on a suitable point for a gathering place, let all who can, meet and elect officers, draft a constitution and By-Laws and get the necessary machinery in motion for an Association. The "Review" is National in its scope, and its pages are at the service of all beemen, north or south, east or west. Further notices will appear in these columns later. Meantime, let any who are interested send in suggestions for a consummation so devoutly to be wished.—E. G. B.

The Honey Season to Date

We have not had as many reports of the honey crop conditions to date as we would have liked,

but the indications all point to a good crop of California Sage and Western Alfalfa. There will not be quite as much clover honey on the market this, as last year, although the basswood yielding in some locations will offset the deficiency in the clover crop. Some sections especially Indiana and Missouri report the season as very dry and a short crop. Ohio will not likely get the "bumper" crop of a year ago, although a fair crop will likely be harvested. Michigan and Wisconsin will have about the same amount of honey as a year ago, but mixed with basswood. For our own use we much prefer a blend of about half clover and a half basswood honey, in preference to clear clover. And this is one of those favorable years when honey is of the very finest quality. This in itself will go a long ways towards disposing of the crop of best table stock.

The Wilder article for August came just as we were going to press, too late for this number, but will appear in the September number as usual. Articles intended for certain numbers of the REVIEW should reach this office at least thirty days previous to date of publication, or they may be carried over to a succeeding number.

The Price of Honey for 1914

We shall ask and expect to receive the same price this, as last year although we no doubt will have an opportunity to take much less were we to take the price many will offer. Set a fair price upon your hard earned product, (if you have stock of quality) then do a considerable "hustling" and find a buyer who appreciates good goods and you will come out alright. Say! Do you know! We received 20c in stamps the other day to pay for advertising a crop of about three car loads of honey, did you ever!

If I had three car loads of Alfalfa honey to dispose of this year, (as this party did) I would immediately secure not less than one full page of the REVIEW and do some hustling, AND I'D SELL IT TOO! Why not let folks know you have honey for sale! Produce "honey of

quality," put it up in the very best possible shape for the market, then USE PRINTERS' INK, and take the Editor's word for it, you'll "win out." Get out of the fog! The Jobber will get you if you don't!

Interest Growing

Never before has the writer had so many inquiries from people in Florida who are becoming interested in Apiculture. The immediate cause has been no doubt, a "bumper" orange honey crop and ideal weather conditions over the state generally. Many of those who are enticed into the field of Bee-dom by the allurements of a prosperous year, will grow cold as promptly when the first poor season comes; others will last 'till two poor seasons come in succession, then they, too, will retire, often with a grouchy air, and be "sore heads" on bee-keeping ever after. But from every fresh afflux of amateurs come a few souls who only adhere closer than ever to the calling of their choice, when adverse seasons come and some men of genius are added to the list—men whom the great Bee Brotherhood will be forced by and by to honor.

And speaking of perseverance, there is one fact that stands out conspicuously from the series of articles now current in the Review from the pen of the Georgian apiarist, Mr. J. J. Wilder—that it takes bull-dog grit and tenacity to make any business grow and continue to grow, through thick and thin, year after year—a growth that knows not defeat, nor recognizes a Waterloo.—E. G. B.

United States Department of Agriculture, Bureau of Crop Estimates
Washington, D. C.

Honey Crop Conditions July 1

The following figures are prices paid producers of the United States on June 15, 1914, and the average of the preceeding four years on June 15.

Products	1914.	4-yr.av.
Honey, extracted...	.106	.122
Honey, comb...	.138	.136

On comb honey the estimate is very close when one takes into

consideration the amount of low grade of comb that sells for 10 to 11c per pound. At first thought, those who produce very fine white Comb Honey, would think the estimate altogether too low at less than 14c per pound, but likely the amount sold at less than this will offset what is sold for more. The average estimate on Comb Honey is very close, if anything too high.

On extracted honey the estimate is rather high. We are afraid some of us have sold our extracted for less than .122 during the previous four years and are not now receiving .106 for what we have. In figuring an average price on extracted honey, one must take into consideration the 70c per gallon baker stock, as well as the best white for table use at 9 and 10c per pound. The average between 6cts. per pound and 9 cts. per lb. would be between seven and eight cents as the average selling price of extracted honey for the last four years, as received by the producer. One would wonder if we do not need some good practical bee-man in the Bureau of Crop Estimates.

Member C. F. Lang, La Crosse, Wis., writes under date of July 15th as follows: "I am shipping comb honey out of the state to a commission house, selling by the case. The commission house in turn sells to the grocer, who weighs the honey out to the customer. Now why should I be compelled to mark new weight, exclusive of the wood, on each section?" (In your case friend Lang, you are considered the Manufacturer, producer,) and the ruling from Washington says very plainly that it is the Manufacturer who must stamp each unit that is to be sold to the consumer. In your case it is the individual section that is considered the unit, and as you produce it exactly as it is handed the consumer over the grocer's counter, you are the one required to stamp the net weight upon it. Were your comb honey sold direct to the consumer by the case, then the case would be all that would be required of you. We have good authority for saying that if your shipments were extracted honey, in 60 lb. tin cans, shipped to the bottler,

(not the consumer) no net weight label will be required, but in turn the bottler who puts the honey up for the retail trade will be the one who must place the net weight label on each package. As the net weight law does not take effect until September 3rd, 1914 all honey of this year's production put up for market before that date will not have to have the net weight mark, **EVEN THOUGH IT BE NOT SOLD UNTIL A LATER DATE.**

Another member writes and asks if he can write the net weight on his labels by hand, (Presumably with ink) would say that we find no ruling along this line, so we infer that the hand writing if legible would be sufficient.

All bee-men are familiar with the tone assumed by the average commercial newspaper (be it daily or weekly) in writing up anything pertaining to Bees. Apiculture to the uninitiated appears but an opportunity for display of wit (?) and the only way an average reporter can treat any bee incident is by attempting to be facetious. The reasons for the fact mentioned are probably two in number,—first, the average newspaper man knows as much about the size and appearance of the men on Mars, as he does about MODERN Bee-keeping. Consequently if he writes at all of bees, he is in the position of the late Mark Twain, who said he "liked to talk on a subject he knew nothing about, because he was not HAMPERED by FACTS." Secondly, the average man comes into contact with that wonderful insect, *Apis Mellifica*, the Honey Bee, only through the POINTED end; and as a sort of revenge, he seeks to get even, as it were, by dipping his fluent pen in the venom of his spleen, and fabricates a Canard full of caustic wit, at the expense of fact, with great demands made on the imagination. Such an article the usual Daily treats as it would a bit of "write-up" on "The Great Sea Serpent," or "The Buried City of Atlantis, Discovered," or such reportorial junk; it is used merely to "fill up" space, when news is scarce.

In delightful and refreshing contrast to the above mentioned trend the majority of periodicals is an

article that we read recently. It appeared in one of the largest dailies; the Phila. "Evening Bulletin," for June 16th, 1914. The heading ran thus: "When hunting bees, go with an expert," with the sub-head "An Art at its best." Out of curiosity I began reading, my curiosity turned to surprise, and the further I read; the more my wonder grew. The subject was bee-tree hunting—Here is what I read:

"Most people are familiar, theoretically at least, with the manner in which wild bees are hunted and their treasures located, though the men who engage in that sport or business, whichever it may be called, are comparatively few, owing to the hardships involved and the peculiar skill required.

The man who hunts bees cannot choose his route or set a limit to his travels in the wilds if he is to succeed. He must go where the insects lead and as far as the necessities demand. He must have an eye as sharp as that of the eagle."

Could anything be more safe, and sane and sensible, than the tone of this? It is fit for the pages of any bee journal or work on apiculture.

Again I read further on:

"The harvesting of the honey is called 'taking up' the tree. But the tree is not taken up. It is cut down, the wood is chopped away from the cavity in which the bees have lived and placed their winter stores, and the honey is taken out and placed on pails and lugged away, leaving the swarm to gather another crop or starve to death, which in most cases they undoubtedly do, as the hunters rob them so late in the season that there is not time for the industrious insects to retrieve their loss before the coming of cold weather."

One paragraph particularly attracted my attention. It was a remark that denoted unusual acumen on the part of the observer. Speaking of the well known peculiarity in the conduct of bees under disturbed conditions,—the writer remarked

"They will attack some men who are not molesting them at all while ignoring the man who is laying waste their home and preparing to walk off with food supplies."

Most beemen are aware that the operator over a hive will often escape molestation, while an observer near by is usually the first to be assailed.

Altogether the article, appearing as it did, in one of the largest Dailies of Phila. was remarkable for the sane and rational tone, and

the spirit of sincerity and sobriety of expression, with none of that "would-be-facetiousness" that spoils so many press articles on bee-keeping. We commend it.—E. G. B.

Our Customer Now Supplied With Beeswax

Several of our members realized 36c per pound for their beeswax through the NATIONAL, but at present our customer is supplied and we know of no place where we can get more than market price for members' wax. We hope to make a similar arrangement another season to dispose of members' wax at an advance price.

In making up winter loss, or where one has combs to be filled with bees, the better way of preventing swarming is as follows: when a colony is found starting cells in preparation to swarm, a comb containing small unsealed brood, WITHOUT CELLS is selected and placed in the center of the set of empty combs to be filled. The queen is now found and run in on this comb of young brood and empty combs. The old hive is now set aside and this prepared hive set in its place with an excluder on top. Now put on their part filled upper stories, one, two or three as the case may be. On top of these upper stories place a second excluder, and the brood nest containing cells on top of all. On the eleventh day following you will either have very ripe cells, or a virgin in the brood nest above, which can be set on a stand of its own if increase is desired, or left and extracted, as you prefer. The mission of the second excluder is, to keep the virgin in the story you want her in, (should she hatch during the eleven days) and save your hunting through several sets of combs for her when you are ready to set her off with the now sealed brood. With this method you get the finest cells possible for your new colony and with but little trouble and expense.

A Peculiar Clover Flow

With hives overflowing with bees, weather conditions were such during June that bees could not fly only about a fourth of the time.

Rain! Rain! Rain! About three days rain then a clear day. The redeeming feature was that whenever the sun did shine, there was an abundance of nectar in the clovers, and we secured about a fourth what honey might have been harvested, had weather conditions been more favorable.

The Basswood (Lynn) Flow

The Basswood timber, although rather scarce in this locality, blossomed profusely this year, and with ideal weather conditions, during the two first weeks of bloom, as much or more basswood honey was secured as clover.

This is July 15. At this writing we are having heavy rains again which we expect will end up the white honey flow for 1914. The crop is every pound of it still upon the hives, and will not be extracted until the last gathered nectar is well ripened by the bees.

This is the 20th century method of producing extracted honey, although the product will be mixed, about half and half clover and basswood. Had we tried to have kept our clover honey separate from the basswood, it would have necessitated extracting in the midst of the honey flow. Watery, poor thin honey would have been the results. None of it for us! But instead we have fully ripened, on the hive, honey, that we defy anyone to equal by any other process known to modern bee-keeping. If any of our readers are in a "rut" along the line of a system of production of extracted honey, we advise you to abandon it for the up-to-date modern system.

A letter from Mr. James H. Huskey of Ariel, Fla., in the mangrove belt, writing at end of June, states, "Bees are doing nothing, do not believe they will do anything this year." We might add that it is too soon to make definite report of either the Mangrove or Cabbage palmetto, as yet, by the next issue of the "Review" we can speak definitely. The mangrove which lasts from five to six weeks is very sensitive to weather conditions. The scrub palmetto which is over and gone, yielded very poorly this year, probably owing to the dry, hot weather end of May.—E. G. B.

We did not make our wants quite clear to our printers in the July number of the REVIEW, for two articles appeared among the Editorials. As they are two very good articles, we did not feel ashamed at all for their presence, but mention it here as a mistake that we will try and rectify in the future. This is one of the disadvantages of printing the REVIEW at "arms length" for we do not see the Review after it is set up ready to print.

The Cabbage Palmetto is a tall and stately tree and blossoms about the middle of July (varying with the locality and latitude) in huge racemes that resemble ostrich plumes, 5 feet in length, at their

best. There is no prettier sight than one of these huge bouquets of creamy white petals so fragrant that one seems dropped down in a bed of spicy perfumes! The honey of the cabbage palmetto is almost wafer white if secured in its purity, unmixed with other blossoms. In but few localities, however, is it possible to secure it unmixed.

On the east coast it mingles with the mangrove and the blend is a very choice one. There is but one section of Florida, however, where in some years it is possible to get the honey from the cabbage palmetto in a pristine pure condition. I refer to the strip of land on the west coast between the ocean on west and the Miakka river on east, south of Sarasota, Fla.—E. G. B.

Field Notes From Michigan

By FRANK ERIC MILLEN B. Sc. A. East Lansing, Michigan

A New Bee Escape or Super Clearer

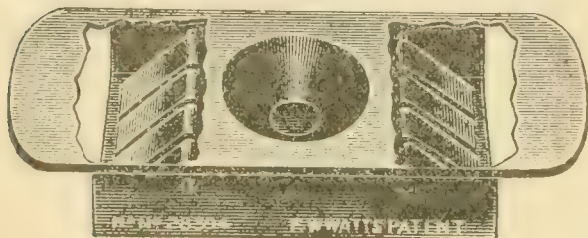
A new Bee escape has been placed on the English market. From the appearance of the cut, shown with these notes, bee-keepers can see the principle on which it works. It is the invention of Mr. F. W. Watts, 136 Goodrich Road, East Dulwich, England. The trap doors or flanges are made of aluminum, and very light and finely adjusted. They work automatically and close directly the bees have passed through. With this principle and the large number of exits many bees can pass through in a very short time, and once started they can pass out in one continuous stream. The escapes are all metal and so can be easily cleaned, by dropping in boiling water, in case they become propolised. In this country and Canada where a large number of escapes are in use they should find a ready sale and doubtless will be much appreciated by bee-keepers on this side of the pond. In England they sell for twelve cents each and so are very reasonable, with the added cost of transportation they should still be within the reach of every bee-man wanting a good super clearer. If put on accidentally upside down, they cannot trap bees in supers as the

flanges remain open thus allowing the bees ingress and egress.

Bee Veils

The subject of bee veils is one that opens quite a field for discussion. I suppose there are as large a variety of veils in use today, as there are makes of hives, and inspectors know these latter are legion. Veils are made of many materials, from sheeting to wire screening and range in color from black to white, with all other shades intervening. The shapes are as numerous as the colors, and kinds of material. Undoubtedly some of these veils are worthy the name and answer their purpose, but many do more harm than good. The following points should be taken into consideration when getting a veil:—ease of vision, safety, coolness and strength. The face of the veil should be black, silk preferred, because black is the best color to see through, and seems to offer the least resistance to the sight. The body of the veil should be white, because it is cooler and less objectionable to the bees. For the body of the veil, white hobbinette 30" wide, double width, is as strong and serviceable as any material I know, this with the

black cotton or silk tulle face, will make a good veil. I like to have arm holes cut in within an inch or two of the lower end, then have elastic in arm holes, top and bottom. This keeps everything bee tight. Pull the veil on the arms as near the shoulders as possible, then it will not drag when the arms are being used. A veil of



The Watts Bee Escape

this description is giving me excellent service, using it every day, and with the exception of a few punctures in the silk face, caused by wire screen veils, a bee cannot enter.

Three Brood Diseases in One Hive

On a recent inspection trip I

found sacbrood, American and European foulbrood in one colony. Though I have frequently seen sacbrood and American foulbrood together, this is the first occasion in which I have noticed the three. It seems very unusual to find American foulbrood and European foulbrood in one apiary. In this case, the symptoms of each disease were plainly seen and pointed out to the beekeeper.

Many bee-keepers confuse sacbrood and American foulbrood, especially when sacbrood is found in perforated capped cells. Sacbrood never possesses that glossy coffee color typical of American foulbrood, and is never stringy, neither has it the gluey odor of American foulbrood.

Basswoods Heavily Budded

If basswoods are budded as heavily in other parts of the state and other states as they are in the places I have lately visited, with proper weather conditions, there should be a fine flow from this source. I hope that when these

notes appear the promise will have

Imatured and a heavy crop secured.

Field Notes From Iowa

By J. W. STINE, Salem, Deputy Inspector for Iowa

The month of May did not prove as good for bees as it started out to be, for the weather was too cold and dry for bees to do well; however after the first of June the weather has been better although it has been rather dry until the recent rains which came the 13th and 14th. White clover is looking better now and the bee-keepers are more hopeful.

Our experiences in Iowa Co. have been rather trying in some ways for both the American and European foul-brood have made great headway in some parts of the county, and the numerous requests coming from over the county make it hard to know where to go next. Several urgent calls from other counties and all asking for immediate attention will call for a lot of patience and the old saying will

be true under the circumstances, "First come, first served."

We have found some very strange cases in Iowa Co. Some colonies having the American foulbrood on one side of the hive and European on the other, and in some cases on opposite sides of the comb. We have found the same true also of sacbrood. Sacbrood is also quite prevalent in this county.

European foulbrood has been showing up in several new localities. We have found it to be about as bad in weakening the colonies as American foulbrood. Every beekeeper should get a copy of the new bulletin from Ames on how to distinguish the three brood diseases, written by Mr. Pellett.

You are invited to become a National member.

The National Bee-Keepers' Association

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.....Box 16, Fair Oaks,
N. MICHIGAN—Ira D. Bartlett....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola Ohio.
OREGON—H. Wilson.....Corvallis, Or
THE NEW MEXICO BRANCH—
Henry C. Barron, Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger...
.....Liverpool, Pa.
PUERTO RICO—J. W. Van Leenhoff
Ponce, Puerto Rico, 11 Marina, St.
SOUTH IDAHO AND EAST OREGON—
R. D. Bradshaw.....Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—Willis C. Collier, Box 154..
.....Goliad Texas.
VERMONT—P. E. Crane.....
.....Middlebury, Vt.
VINTON BEE-KEEPERS' ASS'N—...
.....E. J. Winder, Vernal, Utah.
WASHINGTON—J. B. Ramage.....
.....Rt. 2, N. Yakima, Wash.
WISCONSIN—Gus Dittmer.....
.....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass

Minutes of the National Bee-Keepers' Association In Convention

Assembled at the Planters' Hotel, St. Louis, Mo., Feb. 17-18-19, 1914

Morning Session, February 18, 1914, 9:15 a. m.

President Gates called the Convention to order and asked Mr. E. J. Baxter to take the chair, during the reading and discussion of papers.

Mr. Moore read paper by H. F. Hellenmeyer on "Kentucky as a Bee State."

Mr. Wesley Foster read Prof. H. F. Wilson's paper, "Development of Apiculture in Oregon."

After the reading of these papers President Gates again took the chair.

Upon consent of the Association Mr. Baxter and Mr. Moore were permitted to have equal votes in representing the Illinois Association.

The Committee on Purchase and Sale reported through Mr. Frank C. Pellett, Chairman, as follows:

The profit on the sale of supplies by the National was not over 6 per cent, a total amount of \$384 on the year's sales of supplies.

The Resolution of Dr. E. F. Phillips was reported back to the Convention without recommendation, by the Purchase and Sale

Committee.

Signed, FRANK C. PELLETT,
Chairman.

Note—Resolution of Dr. Phillips is attached to this original copy.

The report of Committee on Purchase and Sale was unanimously voted to be laid on the table.

The Committee on Publicity through Mr. W. B. Moore, Chairman, reported as follows: We, your Committee on Publicity recommend that this Convention take action authorizing the Directors to dispose of the Review to the best advantage to the Association.

Signed, W. B. MOORE,
Chairman.

The report of the Publicity Committee voted to be laid on the table.

The Committee on Policy and Extension reported through Chairman J. S. Ward as follows:

Your committee on Policy and Extension submit the following report; on the question of the Review officials acting as purchasing agents for the members of the National.

1st. We recommend that the policy of the National with the Managers of the Review acting as agents in the purchase of supplies and sale of products for all bona fide members of the National be continued.

2nd. The Board of Directors to arrange for three or four purchasing agents—said agents to be subject to the Board of Directors.

3rd. Said agents to be selected as far as possible from the Board of Directors.

Signed by Committee,
J. S. Ward, Chairman.
Geo. W. Williams,
D. C. Polhemus.

The report of the Committee on Policy and Extension was voted laid on the table.

The motion was made and carried to take up the election of officers as the next order of business.

The motion was made and carried that Dr. Burton N. Gates be given the unanimous vote of the delegates for President.

Frank S. Pellett and D. C. Polhemus were nominated for Vice-President. Mr. Pellett was elected Vice-President by a vote of 22.

E. G. Carr and Geo. W. Wil-

liams were nominated for secretary. Mr. Williams was elected by a vote of 20.

The motion was made and carried that the Secretary be instructed to cast one ballot for Mr. Williams as Treasurer.

The resignation of Mr. Wilmon Newell as Director, who had one more year to serve, was accepted.

The report of the Standing Committee on Code and Policy was given by E. J. Baxter Chairman, as follows:

Your Standing Committee on Code and Policy would recommend that for the current year we continue our present policy in regard to publication and supplies, provided it is done so as not to bind the members of the Association in a financial way. We would further recommend the adoption of the resolution reported by the Committee on Publicity to take effect not later than the first of January, 1915, and that the Board of Directors be authorized to take action to carry out these recommendations, if adopted

Signed, E. J. BAXTER,
Chairman.

The motion made to divide the report of the Code and Policy Committee and vote on the two propositions separately was lost.

The Code and Policy Committee's report was voted to be laid on the table.

Adjournment.

Delegate Session — Afternoon, February 18, 1914, 1 p. m.

Mr. C. P. Dadant presided at the general session for the discussion of general bee-keeping topics.

The paper by Prof. H. A. Surface, on Soil Fertility and Honey Production, was read.

Paper, Sweet Clover for Bee Pasture, by E. E. Barton, Falmouth, Ky.

Paper, Selective reading, by Geo. B. Howe, Black River N. Y.

Ben G. Davis, Mr. Darby, Mr. Sladen, Mr. Pettit and others spoke in the general discussion.

Adjournment.

Delegate Session — Afternoon, February 18, 1914, 1 p. m.

President Gates called the delegate meeting to order and, after roll call, fifteen delegates and voting strength of 39 being present,

President Gates opened up the matter of incorporation by reading letters from a lawyer he had consulted and also from the Attorney General of Illinois.

After considerable discussion Mr. Moore moved that the National Bee-Keepers' Association incorporate as a fraternal and educational Association. Mr. Bohrer seconded the motion.

A motion was made to amend the original motion to include and add the words, Co-operative Association without profit. The motion to amend the original motion was lost.

A motion was then made to amend the original motion by inserting the words "Co-operative Association." The motion was lost.

A motion was then made, viz: Moved that the National Bee-Keepers' Association proceed to incorporate as a fraternal and educational association and to continue the publication of the Review and the handling of supplies as in the past. The motion carried by a vote of 23 to 16.

A proposed amendment to the original motion was then made to read 'as long as necessary to dispose of the goods already ordered and to dispose of the Review.' The proposed amendment was laid on the table.

A motion was then made to amend the original motion by inserting the following: 'provided, however, that the Board of Directors shall have the power to discontinue the publication of the Review and the purchase of supplies for its members whenever they deem the same will be for the best interests of the Association.' This amendment was accepted by common consent.

The original motion with the accepted amendment then passed by a vote of 32 to 1 against.

The proposed constitution as published in the Review was taken up. Section 1, Article 4.

Section 2.

Section 3. All rejected.

Article 4, passed.

Articles 5, 6, 7, by general consent were laid on the table indefinitely.

It was moved and carried that the Delegate Body go into Executive Session to revise the Constitution.

Moved that the Chair appoint a committee of three on Constitution to make a draft of a Constitution and report insofar as drafted at close of evening session to a committee of the whole. Carried.

The Committee on Constitution here was specified to consist of the President, Vice-President and Secretary-Treasurer.

Evening Session, February 18, 1914

Dr. Burton N. Gates called the Convention to order after a photograph of the delegates and attending bee-keepers had been taken.

Mr. C. P. Dadant spoke of Bee-Keeping in Europe.

Dr. E. F. Phillips showed the film "The Honey Bee Illustrated."

Prof. Morley Pettit showed lantern slides illustrating bee-keeping in Canada and especially the work of the Ontario Agricultural College in Apicultural education.

Mr. Wesley Foster illustrated Colorado bee-keeping with forty slides.

Entertainment film (Western) courtesy of Mr. Holekamp.

Comedy film, courtesy of Mr. Holekamp.

Rerun of the Government film.

Music furnished by the courtesy of Mr. Holekamp.

A rising vote of thanks was extended Mr. Holekamp for the royal manner in which he entertained us. Adjournment.

Morning Session, February 18, 1914, 9:30 a. m.

Dr. Gates called the convention to order.

Mr. E. S. Miller, of Valparaiso, Indiana, read his paper, "The Perfect Bee Cellar."

Questions and general discussion was brought out by Mr. Miller's paper.

Dr. E. F. Phillips read his paper on Humidity and Wintering, which was followed by active discussion.

It was moved and seconded that the delegates withdraw and sit in Executive Session. Motion lost. General Session continued.

Mr. Crane's paper read by title.

Mr. J. J. Anderson's paper read by title.

Mr. F. W. L. Sladen read his paper on Nectar Secretion.

Discussion followed the reading of this paper.

Mr. J. M. Buchanan read his paper on Direct Introduction of Queens.

Dr. Burton N. Gates gave his paper on the Standardization of Bee-Keepers' supplies. Discussion followed.

A Standardization Committee with Gates as Chairman was voted to be appointed.

Demonstration of the National Grading rules was given at the close of the morning session by Wesley Foster.

Adjournment at 12:15 p. m. to 2:00 p. m.

Afternoon Session, February 19, 1914, 1 p. m.

DELEGATE SESSION

Dr. Burton N. Gates, President, called the Session to order, and after roll call, the report of the Resolutions Committee was read by Dr. E. F. Phillips for Dr. Bohrer, Chairman.

Resolved, That the National Bee-Keepers' Association through its meeting of delegates in session at St. Louis, Mo., expresses the deep regret of the bee-keepers in the untimely death of its director, Mr. F. B. Cavanaugh, and extends to his bereaved family the deepest sympathy.

Resolved, That we extend to Mr. R. A. Holekamp, of the local committee, our hearty thanks for his untiring efforts in making our meeting one of the most pleasant in the history of the organization.

Resolved, That we extend to the management of the Planters' Hotel our thanks for their many courtesies.

Resolved, That we extend to The Blanke and Hauk Bee Supply Co., our thanks for sending out notices concerning the meeting.

Resolved, That we extend to the families of Mr. A. A. Ledington, Wm. McEnvoy and Oliver Foster the sympathy of the membership of the National Bee-Keepers' Association on their deaths.

Signed,

DR. BOHRER.

W. B. MOORE,

E. F. PHILLIPS.

The report of the Resolutions Committee was received and adopted and the Secretary instructed to copy resolutions and mail them

to the families of the deceased.

The election of two directors for two years and one director for one year was taken up.

Mr. Geo. W. Williams was elected for two years.

Mr. E. G. Carr was elected for two years.

Mr. J. M. Buchanan was elected for one year.

Mr. E. D. Townsend and Mr. Foster hold over one year.

The resolution that Mr. Townsend's recommendations concerning paper and print for the Review be unanimously approved was passed.

The matter of incorporation was taken up and proposed articles of incorporation were read.

Motion made and carried that "Executive Committee" be substituted for Board of Directors.

Moved and passed by common consent that all the duties of the officers be put in the By-Laws.

The following Resolution was also passed by common consent.

Resolved, That routine business and executive duties shall fall to the Executive Committee consisting of President, Vice President, and the Secretary-Treasurer; and that special and new business within the province of the Association and consistent with the Constitution and By-Laws shall fall to the Board of Directors through their proper committee. Further that matters of new policy shall come before the delegate body or be referred back to the affiliated body.

The report of the Committee on Purchase and Sale was taken from the table and action upon the report indefinitely postponed and the Committee discharged.

The report of the Committee on Publicity was handled in the same manner and the committee discharged.

The Standing Committee on Code having reported was discharged.

The report of the Committee on Policy and Extension was accepted and report considered as final policy of the Association. Committee discharged.

The Crop Report Committee reported:

We, your Committee on Crop Report, suggest that it would be to the advantage of many bee-keepers

living in the northern states to have a third letter and inquiry and consequent report on crop conditions taken not later than September 1st, in addition to the two already proposed by the bureau of crop statistics, in order to get an estimate of the fall crop.

Signed, FRANK C. PELLETT,
Chairman.

The report was accepted.

The Committee on Constitution reported as follows:

We, your Committee on Constitu-

tion, report that the proposed amendments published in the Review were found to be so hastily drawn that we could do nothing practicable with them, and inasmuch as the proposed Constitution was handled in Committee of the whole we ask to be discharged with this brief report.

Signed, WESLEY FOSTER,
Chairman.

The report was accepted and Committee discharged.

Adjournment of 1914 Convention.

Bee Inspection in New Jersey

Given By E. G. CARR, at National Bee-Keepers' Association Convention, St. Louis, Mo., Feb. 1914

It would hardly be advisable to say that New Jersey was more in need of bee inspection than any other state and it is doubtful if it would be true, especially when the conditions are compared with those in any other state where bees have been kept for a long time, but it is true that the need was very great.

We are led to believe that total extinction of the honey bees in such parts of the state where there was no progressive bee-keeper fighting the disease, was only the matter of a few years, in fact it had already come to pass in the least progressive sections.

Bees on farms where they are the most needed from an economic standpoint have fared the worst and the last census shows a decrease in ten years of 3,500 colonies which is undoubtedly due largely to disease. This means a property loss of at least \$7,000 counting the bees and combs alone, aside from an annual loss of \$11,000 the amount of honey and wax they would have produced even at the very low estimate of 14 pounds of honey and two-thirds of a pound of wax each. This is not taking into account any reduction in fruit crops which may have been caused by lack of bees to properly fertilize the blossoms.

But it was not from the farm that the cry for bee inspection came but from the apiarists who had somewhat of cash invested in the business and were getting paying crops but who were caused

much trouble and expense because of the indifferent neighbors who allowed their bees to rot away in the fence corners and thus were a constant source of irritation against which the bee-keeper had no protection.

Since the year of 1902 and possibly prior to that date the bee-keepers of New Jersey realized the need of some legal protection against the spread of foulbrood and in that year the New Jersey Bee-Keepers' Association was formed and a bill drafted to be passed upon by the law-makers but so far as can be learned it died without a struggle. Since this time the sentiment in favor of protective legislation grew yearly and from time to time the subject was brought before our representatives at Trenton with negative results until 1910 when the bill got as far as the Governor who "flagged" it giving as his reasons he did not consider keeping diseased bees great enough offence to be punishable as a misdemeanor also there was no provision made for appeal from the inspectors' decisions. Early in 1911 the legislative committee appointed by the Association assisted by Dr. Phillips and the late Dr. John B. Smith, State Entomologist, framed a bill which after much work by those in charge, was passed and received the approval of the Governor on March 28th.

Briefly the provisions of this bill are as follows:

1. Unlawful to keep diseased bees after notice by inspector.
2. Queen rearers must have their yards inspected twice a year.
3. State Entomologist to inspect all places where bees are kept.
4. State Entomologist to notify owner of disease, give orders for treatment and may order bees into frame hives at his discretion.
5. Unlawful to allow infected material to be moved without consent of inspector.
6. When destruction of material is ordered and owner questions the diagnosis, appeal may be made within three days.
7. Offenders to be punished as provided in original act to which this is a supplement.
8. Inspector to have free access to all places where bees or materials are kept.
9. \$2,000 annually is set apart by the State Board of Agriculture to carry out the provisions of this act.

This legislation appears to answer all requirements at present with one exception, which is there is no provision made to guard against infected bees coming into the state. It is believed all bees coming into the state should move under an inspector's certificate as does nursery stock at present and it would be a help if both the consignor and consignee were obliged to notify the inspector so that the bees could be watched to guard against their becoming a center of infection.

The first season the deputy was not appointed until July 1 and he spent the remainder of the season in visiting the largest yards and those adjacent thereto. The work was largely of an advisory character and no effort was made to enforce the law except where inspection was resented.

It was found that the list of bee-keepers of the state was woefully incorrect and an effort was made after the active inspection season ended to correct this list by sending county lists to all names listed in that county and asking for corrections and additions. These letters did not bring the desired results. In October the deputy resigned.

The present deputy was appointed on February 1st, 1912 and commenced a personal canvass of the state in an effort to bring the list of bee-keepers up to date so that no time would be lost when the inspection season opened in going to places where bees were no longer kept.

The field work was taken up on May 1st and carried on daily until the second week in September, visiting the apiaries in which the former inspector had reported foul brood and then inspecting yards where disease was known to exist or was strongly suspected.

A more or less complete follow up plan was followed and those who did not report the disease treated within a certain time were revisited.

It was found in a number of cases that treatment had been given and the mailed card had failed to reach the office. It was also found that some would send in the card signed without giving treatment. So it will be readily seen that this plan does not give the hoped for results although it is just possible that no other plan will accomplish more until there is a more general knowledge among bee owners of good bee-keeping practices.

Realizing that lack of bee-keeping knowledge is the underlying reason for lack of profitable returns from the bees in most cases also the reason for the existence of foulbrood, an effort has been made to supply knowledge of the fundamental principles of good bee husbandry by issuing a manual to all bee-keepers in the state. This is now in the hands of the printers. While it is not expected that this will be of interest to the good bee-keeper, great numbers, and in fact the majority of bee owners in New Jersey have no practical working knowledge of bee-keeping and it is hoped this will be of service to them.

It has been found that a certain degree of bee-keeping knowledge must precede our efforts to control foulbrood and the task is hopeless without this knowledge. Cases are known where bees have been shaken and the shaken combs set out for the bees to clean up notwithstanding the printed pamphlet left with the owner describing the diseases, its method of spread and treatment and a warning against using any infected material.

Before starting the campaign of 1913 it was decided to confine the work to a certain part of the state and make inspection of every col-

only within that section, of course covering as large an area as the season would permit, in the meantime calls for inspection from any part of the state were given prompt attention.

Two plans of inspection present themselves for consideration in New Jersey. One is, with the present funds and one deputy to cover as much of the state as possible year after year until it has been completely covered which will probably take six years and the other is to get if possible enough money appropriated to hire enough deputies to cover the entire state in one year and follow it up the next season to suppress any reinfection and after that one deputy could probably keep the work well in hand. The difficulty with the latter plan is this in an economy year with our legislature and it is very doubtful if we could get any increase in our appropriation therefore we are perforce obliged to adopt the first plan. Since calls for inspection from any part of the state are given prompt attention no one can take exception to it on the grounds of discrimination as it has been understood has been the case in Texas.

The two years inspection has resulted in the examination of 716 yards containing 6208 colonies of which 361 were in boxes, kegs, etc.

238 cases of American foul brood and 619 cases of European were discovered. Considerable sacbrood has been met but with one exception it did not seem to be causing any appreciable loss.

Twenty of the twenty-one counties of the state have one or both forms of foulbrood.

Our educational campaign which we propose carrying on when field work with the bees is impossible, aside from the manual which we hope to get into the hands of our people soon, consists of lectures before granges, farmers' institutes and short course students. Demonstrations at fairs and poultry shows and articles on bee-keeping furnished to farm papers.

We are looking forward to the establishment of a demonstration apiary and a more or less complete course in bee-keeping at the Experimental Station farm.

The annual Field Day of the Worcester County Bee-Keepers' Association will be held Saturday, August 8th, at the home and apiary of Mr. O. F. Fuller in Blackstone Mass. The Eastern Mass. Society of Bee-Keepers are to join with them on this occasion. The Committee has not at this time announced the program, but an interesting meeting is being planned.

J. S. WHITTEMAN, Sec'y,
Leicester, Mass.

Attention Iowa Bee-Keepers

The Iowa Branch of the National Association Will Hold two Meetings During August as Follows:

At Clarinda on August 12th, will be held the meeting of special interest to those interested in queen rearing. Mr. Strong, at whose apiary the friends will gather, is a well known queen breeder of long experience. The program will be arranged later, but a profitable occasion is assured. Being so near to Missouri, a number from that state are expected; as also from Nebraska.

Sioux City, August 20th. The bee-keepers of South Dakota, Nebraska and Iowa have for several years held a tri-state meeting. This year, as usual, they will meet at Riverside Park, and the committee in charge will plan a program worth while. These meetings are always genuinely interesting and the committee will insure that this year is no exception.

Editor Review:—I am sending you a picture of my apiary, taken in August, when my crop for last summer was all off, except a few supers, that were left to provide room for the strongest colonies. People who have seen my apiary say I have the neatest bee-yard in the county. The little boy that you see in the picture, is my son, and a good helper he is, too. I have 40 acres of good land, and always have a good crop but have rented the most of it for next year, in order to have more time to devote to the bees. The bee business looks good to me.

I have had a good crop this year, again, but I cannot reach the 266 lb. mark of Dr. Miller! I have averaged 78 lbs. of comb honey this

Subscribe for the REVIEW—now.

year (summer 1913) by spring count, and have doubled my number of colonies by dividing at the close of the clover flow, and I did not do any feeding.

I am in the business to stay. I have ordered \$175.00 worth of bee supplies for the coming season, and anticipate a busy year in the apiary.

Yours truly,

JOHN HEBERT, Jr.,
Caseville, Mich.

Every flower produces a different flavor; if you do not like one kind of honey, try another. For strong flavors, try basswood, goldenrod or buckwheat honey; for mild flavors, try clover, etc.

There is more nourishment in a pound of honey, than there is in a pound of beefsteak. Meat contains 65 per cent water, besides the fiber, which is indigestible. Honey is 20 per cent water, and is almost all digested, leaving nothing to burden



Apiary and Work shop of John Hebert, Jr., Caseville, Mich.

To the Editor "Bee-keepers' Review, How can we educate people to eat more honey? If every local newspaper in the country would carry a standing advertisement, somewhat like this:

"HONEY"

"Eat thou HONEY because it is good," Prov. 24:13.

the people, as a whole, would eat more honey.

Let local bee-men have articles like the following in the local papers from time to time.

"Honey is not only a medicine, but a food, direct from Nature, the nectar of flowers, gathered, modified and evaporated by the bees. No purer or better food has been given to man by his Creator.

the system. It is all used in producing heat or energy. One can eat two pounds of honey at the price of one pound of butter." (Here in the South at least, we can eat more than three pounds of honey at the price of one pound of butter. Ed.)

Then, below that, I would give the prices of honey, different sizes of packages, and time of delivery of orders, etc. If every apiarist would thus keep the idea of "Eat more Honey" before his community, the great central markets would not be overstocked, and as a result, prices would stiffen generally.

EDWARD HASSINGER JR.,
Greenville, Wis.

(The idea advanced above by our friend, Mr. Hassinger, is timely and to the point. Especially at this season, when all the central markets are feeling the congestion resulting from a heavy crop of honey, and somewhat duller times financially, it is well to harp even to the point of being thought "daffy" on the subject on the central thought of the article above, that only by educating the local markets all over our land can we ever hope to have prices for honey reach a level more in accord with the advancement of all other food articles. Ed.)

Editor Review:—I intend keeping one or two hives of bees in the residence district of Pittsburgh, but would like to know, before joining your Association, what laws I would have to comply with (i. e.) How far the hives must be put from neighbors, highways, etc., to receive your protection? Thanking you in advance, I am

Truly yours,

ALEX LIMPET.

(I do not think your state, nor any other, has a law defining the distance you should keep your bees from the highway or dwell-
(Continued on page 302)



The Photo shows a part of the 60 in attendance at the second Iowa summer meeting at the Hall Apiary, June 10th, 1914

The register of names shows more than sixty persons present at the second field day held at the Hall apiary at Colo, Iowa, June 10. The Halls did everything possible to make it pleasant for their visitors and those present felt amply repaid for the time and expense necessary. Some came from more than a hundred miles and the attendance would have no doubt been larger had it not been that so many bees were swarming and other meetings are to be held within a short time.

Prof. Bartholomew of the State Agricultural college was the speak-

er of the day and held the close attention of his hearers while he talked on the value of scientific research to the bee-keeper. Prof. Bartholomew is planning extensive investigations in connection with his department and is the kind of a fellow to make his work practical to the every-day bee-keeper.

A number of subjects were discussed and much time was spent in the apiary examining the hives and equipment and looking for queens.

FRANK C. PELLETT,

President.

ings of others. In the first place the courts would not sustain such a law, but would turn it down as unconstitutional. A few swarms will hardly be noticed by your neighbors in your back yard, providing you procure a quiet strain of Italian stock. It is only when one keeps bees in quite large numbers that trouble might be expected, as the more one keeps in a yard, the more numerous the bees. Consequently the more liable they would be to disturb neighbors. The National just now is not protecting its members in their legal troubles, but do not think you will get in trouble with the few bees you propose to keep in your city lot. Should your bees do your neighbors, or passers-by damage, then you would be liable to civil suit the same as if your other stock should do damage. To sum up your case. It all rests with your management of your bees. You can stir them up through improper handling so they will be a nuisance to your neighbors, or you can by careful handling and gentle stock, keep your bees so quiet and gentle that your neighbors will hardly know you have bees. We are interested in you, so kindly report occasionally how you get along with your bees and neighbors. Ed.)

Notice to Secretaries

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we are very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	116
Gus Dittmer, Wisconsin.....	23
E. R. King, Ohio.....	18

P. E. Crane, Vermont.....	15
E. J. Winder, Utah.....	15
H. E. Gray, New York.....	15
E. G. Carr, New Jersey.....	13
J. S. Whittemore, Massachusetts.....	14
Dr. L. D. Leonard, Minnesota	11
S. W. Snyder, Iowa.....	13
Geo. W. Williams, Indiana....	10
Henry C. Barron, New Mexico	8
J. W. VanLeenhoff, Puerto Rico.....	7
O. H. Schmidt, Michigan.....	3
C. H. Stinson, Idaho.....	5
J. F. Diemer, Missouri.....	3
H. Wilson, Oregon.....	2
Alwin P. Heeim, California....	2
F. C. Bowman, Idaho.....	2
Willis C. Collier, Texas....	1
B. N. Gates, Massachusetts...	9
L. C. Dadant, Chicago, Northwestern.....	1
H. C. Klinger, Liverpool, Pa..	1

Mabton, Wash., June 22, 1914
The Bee-Keepers' Review,
Northstar, Mich.,

Gentlemen:—Enclosed please find one dollar to pay my subscription to Review one year from expiration and I wish the back numbers April, May, and June.

The orchards in the Northwest have become badly infested with fire-blight and many of them will have to be cut down.

The Yakima Valley as well as other localities are badly infested with the disease according to newspaper reports. The orchardists are blaming the rapid and wide spread of the disease to the bees.

I have been informed that the fruit-men have approached the Governor to ascertain if he would approve of a law to eliminate the bee-men.

I heard one orchardist say that he would poison the bees. There is an exceeding amount of aphids as well as ants in this locality and I believe the spread of the disease is largely due to them.

It would be a bad precedent to let such a law become spread upon the statute books of any state and I wish to urge the members of the National Bee-Keepers' Association to keep their attention turned toward the Northwest to see what will be attempted in the way of legislation against our interests.

Yours truly,
S. KING CLOVER.

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

Sweet Clover

A. O. Heinzel, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.
G. M. Withrow, Mechanicsburg, Ill.

Horsemint

Wilmon Newel, College Station, Tex.
Alfred L. Harlt, Elmendorf, Texas.
A. L. Krueger, New Ulm, Texas.

Raspberry

F. D. Stephens, Box 383, West Branch, Mich.

Alfalfa

A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander Wyo.
J. Edgar Ross, Browley, Calif.
Weber Bros., Rt. 2, Blackfoot, Idaho.
Robert E. Foster, Rifle, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.
C. Stimson, Route No. 1, Holly.

Amber

G. Frank Pease, Marshall, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Quirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.
J. M. Cutts, R. 1, Montgomery, Ala.
A. L. Krueger, New Ulm, Texas.

Mesquite

Arizona Honey Exchange, Tampe, Arizona.

Basswood

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franks-ville, Wis.

Clover and Basswood Blend

Elias Fox, Union Center, Wis.
C. D. Townsend, Stickbridge, Mich.
E. D. Townsend & Sons, Northstar, Mich.
Frank Kittinger, Caledonia, Wis.
W. H. Townsend, Hubbardston, Mich.

White Clover

E. F. Smith, Chadwick, Ill.
B. F. Schmidt, North Buena Vista, Iowa.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co. Wis., No. 19.
Byron S. Hastings, Rt. 5, Brookville, Ind.
S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
Orville Safford, Fort Edwards, N. Y.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snyder Bros., Center Point, Iowa.
Dr. C. G. Luft & Son, Fremont, O.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, La Mars, Iowa.
A. S. Crotzer, Lena, Ill.
W. H. Pearson, Mitchellville, Iowa.
M. H. Lind, Baders, Ill.
Frank Kittinger, Caledonia, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prisk, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.

Niels A. Nelson, Dike, Iowa.
Geo. E. Capwell, Cottonwood Falls, Kansas.

A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Charles Lotz, Monroe, Iowa.
Dell E. Berryman, 2308 20th ave., Central City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
Wm. E. Dailey, R. 3, Woodsock, Ill.

Orange

James McKee, 559 Grand Ave., Riverside, Calif.

Buckwheat

Jas. McNeil, Hudson, N. Y.
E. A. Duax, Chippewa Falls, Wis.
Wilmer Clarke, Easlvile, N. Y.

Hwajilla

Frank Talbot, Pearsall, Texas.

Minneapolis, June 27th, 1914
 Bee-Keepers' Review:—I am sending herewith some printed matter explaining the purposes of an organization of Bee-keepers which has just been formed in this city. Could enough such co-operative exchanges be formed, say one in each section producing the same kind of honey, The National could then become a "live body" by acting in the capacity of a clearing house for all the exchanges in the matter of disposing of all the honey to the best advantage.

Yours.

L. D. LEONARD,

Secretary Minnesota Bee-Keepers' Association.

Following is the complete Constitution and By-Laws of the TRI-STATE HONEY EXCHANGE, Inc., referred to in Secretary Leonard's letter:

It will be noticed that the management are well known bee-keepers that the producer will not hesitate to trust their honey with and we see no reason why the exchange should not be a success. There may be one weak point, but this can be rectified later if necessary, that is, the very small capital that will be available to do business with.

Manager Bussey will be the man to make the Exchange a success. If he is another Rauchfuss, success will be assured. The Review wishes you success in the undertaking.

Certificate of Incorporation
 of
**"TRI-STATE HONEY EXCHANGE,
 INCORPORATED."**

KNOW ALL MEN BY THESE PRESENTS, That the undersigned, citizens of the State of Minnesota, do hereby associate themselves together for the purpose of forming a co-operative association or corporation under the provisions of Chapter Fifty-eight (58), Revised Laws of Minnesota, 1905, and for that purpose do adopt the following Certificate of Incorporation:

ARTICLE I

The name of this corporation shall be "TRI-STATE HONEY EXCHANGE, INCORPORATED."

The general nature of its business shall be the raising, buying, selling and otherwise dealing in honey, bees, beeswax and honey products, and the doing of all things requisite to conducting a honey exchange in a co-operative way for the benefit of its members and in such manner as to help its members market their products at a fair

market, and to help establish and maintain a uniform price and grade on honey produced in the States of Minnesota, Iowa and Wisconsin.

ARTICLE II

The period of the duration of this corporation shall be twenty (20) years from and after the 10th day of June, 1914.

ARTICLE III

The names and places of residence of the incorporators are as follows, to-wit: L. F. Sampson, Excelsior, Minnesota; P. J. Doll, Minneapolis, Minnesota; L. D. Leonard, Minneapolis, Minnesota; L. M. Bussey, Minneapolis, Minnesota; Francis Jager, St. Anthony Park, Minnesota; J. A. Holmberg, St. Paul, Minnesota, and F. W. Ray, Minneapolis, Minnesota.

ARTICLE IV

The management of the association or corporation shall be vested in a board of five directors.

The annual meeting of the corporation shall be held on the second Tuesday in December in each year, at which annual meeting the directors for the ensuing year shall be elected. Any vacancy in any office or in the Board of Directors may be filled by the Board of Directors until the next annual meeting.

The names and addresses of the first Board of Directors, who shall hold their office until the annual meeting in December, 1914, and until their successors are elected and qualified, are as follows, to-wit: L. F. Sampson, Excelsior, Minnesota; P. J. Doll, Minneapolis, Minnesota; L. D. Leonard, Minneapolis, Minnesota; L. M. Bussey, Minneapolis, Minnesota, and Francis Jager, St. Anthony Park, Minnesota—and of said directors the following shall constitute the officers of said corporation until the annual meeting in December, 1914, and until their successors are elected and qualified, to-wit: L. F. Sampson, President; P. J. Doll, Secretary, and L. D. Leonard, Treasurer.

ARTICLE V

The amount of the capital stock of this association or corporation shall be One Thousand Dollars (\$1,000), and shall be paid in at such times and in such amounts as the Board of Directors shall determine. The capital stock of said corporation shall be divided into one hundred (100) shares of the par value of Ten Dollars (\$10.00) each.

ARTICLE VI

The highest amount of indebtedness or liability to which the corporation shall at any time be subject shall be Fifteen Thousand Dollars (\$15,000.00).

ARTICLE VII

The first meeting of the corporation may be held at any time and place agreed upon by the incorporators. Any meeting of the corporation shall be a valid and regular meeting at which all of the stock of the corporation is represented in person or by proxy, no matter how called. Notice of the annual meeting shall be given to each stock holder by the Secretary of the corporation, by mail, at least ten (10) days prior to the date of such meeting and no other notice of such meeting shall be required.

ARTICLE VIII

The directors of said corporation, either by By-Laws or otherwise, may provide for beneficial members in said corporation. A beneficial member shall be a resident either of the State of Minnesota, Iowa or Wisconsin, and shall be a person who handles his honey and honey products through the medium of this association, and who shall pay such beneficial membership fee as shall be prescribed by the said directors, but a beneficial member shall have no vote in the association for any purpose.

ARTICLE IX

The profits of the earnings of said association shall be distributed to those entitled thereto by the By-Laws, in the proportions and at the times therein prescribed, which shall be as often as once in twelve months, and such net profits, after paying a fair percentage as a dividend on the stock of the corporation, shall be divided equitably among the stockholders and the beneficial members in accordance with the By-Laws of said corporation.

ARTICLE X

This certificate may be amended at any annual meeting of the stockholders or at any special meeting of the stockholders called for that purpose, by a three-fourths vote of the stockholders present and voting at any such meeting and if such amendment is to be made at a special meeting, then at least thirty days' notice of such meeting, specifying the purpose thereof, shall be given to each stockholder at his address as it appears on the books or records of the association.

IN WITNESS WHEREOF, The said incorporators have hereunto set their hands and seals this 5th day of June, 1914.

L. F. SAMPSON, Excelsior, Minn.
P. J. DOLL, Minneapolis, Minn.
L. D. LEONARD, Minneapolis, Minn.
L. M. BUSSEY, Minneapolis, Minn.
FRANCIS JAGER, St. Anthony Park, Minn.
J. A. HOLMBERG, St. Paul, Minn.
F. W. RAY, Minneapolis, Minn.

BY-LAWS

OF

"TRI-STATE HONEY EXCHANGE,
INCORPORATED."

SECTION I

The Board of Directors of this association shall have charge of all the business of this association, and shall from their number elect a President, a Secretary and a Treasurer, who shall serve as officers of the association. The officers named in the Articles of Incorporation shall serve as such until the first annual meeting on the first Tuesday in December, 1914, and until their successors are elected and qualified. The election of officers shall occur each year at a meeting of the directors to be held immediately after the annual meeting and on the same day.

SECTION II

The President shall preside at all meetings of the association and of the Board of Directors and shall have general supervision of all the affairs of

the association, and shall sign all deeds and stock certificates, and contracts other than ordinary mercantile contracts which may be signed by the General Manager.

In the absence or disability of the President, he shall select a member of the Board of Directors to act in his stead.

SECTION III

The Secretary shall keep a full and true record of the meetings and proceedings of the association and of the Board of Directors, and shall with the president sign all stock certificates and keep a record of all stock certificates and of all transfers of the same. His stock record shall show the name and address of each stockholder, and such address shall be deemed the true address for the purposes of sending notices and for all other purposes of this corporation.

SECTION IV

The Treasurer shall keep a record of the moneys received for stock or goods sold; shall sign all orders for money to be paid out and all notes and checks; and shall report to the Board of Directors whenever requested; and shall make a full account and complete report for the preceding year to the association at each annual meeting.

SECTION V

The Board of Directors may appoint a Manager, who, under the direction of the Board of Directors, shall have active charge of the trading business of the association, and to deposit the same marketing of honey, bees, wax, or honey packages, and shall have authority to collect and receive money due the association, and to deposit the same forthwith in such bank as the Treasurer may direct for the credit of the association. He shall also countersign with the Treasurer all checks, notes and orders for money to be paid, and shall have authority to sign such ordinary contracts with trading customers as the Board may determine to use.

SECTION VI.

The Treasurer and Manager shall give bonds to the association for the faithful performance of their duties, including a full accounting, whenever called for, in such sums and with such surety as the Board of Directors may designate.

SECTION VII

The Treasurer and Manager shall receive such compensation for their services as may be decided on from time to time by the Board of Directors.

SECTION VIII.

An active member of this association is one who appears on the records of this association as a stockholder owning one or more shares of stock in this association.

SECTION IX

Any person who produces honey in Minnesota, Iowa, or Wisconsin may become a beneficiary member by application to the Secretary of this association and paying the annual dues of one dollar. Any person who sells honey produced in Minnesota, Iowa or Wisconsin to this association under the grading rules of the association automatically becomes a beneficiary member, and

the annual dues of one dollar shall be retained from the purchase price of his product.

SECTION X.

Beneficiary member dues shall be used only for equipment necessary to conduct the business of this association.

Beneficiary members shall be entitled to have any information this association has in reference to sales, prices, grading rules on honey and the like, and it shall be the duty of the officers of the association to furnish all such information freely on request.

SECTION XI

Voting at the annual meeting of this association shall be by ballot. Each active member shall be entitled to only one vote, whether he holds one or more shares of stock.

Not less than seven active members shall constitute a quorum in any regular or special meeting.

SECTION XII

The net profits of this association shall be distributed as follows: Eighty per cent. to be paid to the members in proportion to the honey sold by each member; ten per cent. to be used for equipment necessary to conduct the business of this association; and ten per cent. to be paid to the active members in proportion to the stock held. In estimating net profits for purpose of such division, the dividends paid to stockholders shall be deducted.

SECTION XIII

Dividends upon stock shall be paid from the net earnings only, and shall never exceed six per cent. per annum.

SECTION XIV

These by-laws may be amended by a three-fourths vote of all active members present and voting at any annual meeting of the stockholders, or at any special meeting of the stockholders called for that purpose; but if such amendment is made at a special meeting, then at least thirty days' notice of such meeting, specifying the purpose thereof, shall be given to each stockholder or active member at his address as it appears upon the books or records of the association.

SECTION XV.

Special meetings of the stockholders or directors may be called at any time by or upon direction of the President, and shall be called at any time upon request of two of the directors. Notices of each meeting shall be signed by the President or Secretary, and shall be mailed to each stockholder or director at his address as shown by the records of this association, at least five days before such meeting, except in cases of amendment of the Articles or By-Laws, when the notice shall be thirty days, as herein and in said Articles provided.

It helps a magazine wonderfully, if you will say I saw your advertisement in the Review when writing our advertisers.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the bee-keeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

SAGE HONEY—George B. Lariman, 1066 E. Calf. St., Pasadena, Calif.

WANTED—Beeswax at 31c per lb. **JOHN O. BUSEMAN**, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. **R. A. BURNETT & CO.**, 173 So. Water St., Chicago.

WANTED—Five or six tons of amber and buckwheat extracted honey. **HENRY J. ZINN**, 1135 Wyo Ave., Forty Fort, Pa.

WANTED—Glassed comb and extracted honey; also beeswax. **JOHN O. BUSEMAN**, 4141 N. 7th St., Philadelphia, Pa.

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. **W. W. Marmaduke**, Washington, Ind. tf

WRITE US for prices on car lots of Fine Alfalfa Extracted honey to be delivered after July. Address **MARTIN BROTHERS**, Lander, Wyoming.

FOR SALE—Orange honey, 1914 crop. Packed in 60-lb. cans, 2 in a case, net weight. Price 9c per lb. Sample free. **JAMES McKEE**, 559 Grand ave., Riverside, Calif.

HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We are paying 34c per pound for nice bright yellow, clean beeswax. **CHAS. ISRAEL BROTHERS CO.**, 486-490 Canal St., New York, Established in 1875.

BEEES AND QUEENS

FOR SALE—800 colonies of bees, 8-frame hives, operated for comb honey. **W. P. COLLINS**, Boulder, Colo.

FOR SALE—One to 100 colonies bees in 10-frame hives. Any quantity to suit purchaser. Address **L. E. Evans**, Onsted Mich.

GET TOP NOTCH PRICES BY USING LEWIS SECTIONS FOR YOUR HONEY AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributer. **G. B. Lewis Company, Watertown, Wis.**

FOR SALE—15 colonies Italian bees in Danz hives. Combs drawn on full sheet foundation. Write **LEON MORRIS**, Elizabethtown, Ind.

WANTED—30 to 50 free from disease colonies of bees. Address **J. A. PEARCE**, Route No. 1, Grand Rapids, Mich.

NORTHERN REARED Queens of Moores' strain of leather colored, three banded Italians after June 20. Untested \$1.00 each 6 for \$5.00, 12 for \$9.00. **RAMER & GLUEN** Harmony, Minn. tf

ITALIAN QUEENS—Bees by the pound. Apiaries under State inspection. Descriptive list free. Leaflets, "How to Introduce Queens," 15c.; "How to Increase," 15c.; both for 25c. **E. E. MOTT**, Glenwood, Mich.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. **D. J. BLOCHER**, Pearl City, Ill.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c; 6 for \$4.50; \$8.00 per dozen. No foul brood. **D. G. LITTLE**, Hartley, Iowa.

QUEENS by return mail or your money back. Guaranteed purely mated. **J. E. Hand** strain of 3 Banded Italians bred for gentle Honey gathering and wintering. State inspector's certificate. Select untested 1, 75c.; 6, \$4.; 12 \$7. Tested 1, \$1.; 6, \$5.; 12, \$9. Select tested 1, \$1.25; 6, \$7.; 12, \$13. Write for price on large orders. **J. M. GINGERICH**, Arthur, Ill.

REQUEEN your bees this fall with young queens bred from Doolittle's best breeders. We have 500 or more choice untested queens on hand at all times. Prices 60c each, \$6.60 per dozen. Delivery guaranteed. Nuclei 2 frame \$1.50, 3 frame \$2.25. We have apiary of hundred colonies for sale at bargain on easy terms of payment. Particulars on request. **SPENCER APIARIES CO.**, Norahoff, Cal.

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen..... .75
1 doz..... .7.20
4 doz. or more.....50 cents each
J. H. HAUGHEY, Berrien Springs, Mich.

GOLDEN ITALIAN QUEENS about June 1st. Tested \$1. Untested 75 cents each; dozen \$7.50. Satisfaction guaranteed. **J. I. DANIELSON**, Fairfield, Iowa, Route No. 7.

1914 QUEENS READY IN APRIL—Untested, 75c. Write for prices on nuclei for May delivery. We have Moore's strain of Leather colored Italians. **OGDEN BEE AND HONEY CO.** Ogden, Utah.

DON'T WORRY—Get your queens from Murry. Best 3-banded stock obtainable. Reared by latest scientific methods. No better honey-gatherers anywhere at any price. No foul brood or other disease. Tested, 1 for \$1.00; 6 for \$5.00. Untested, 1 for 70 cts., 6 for \$4.00. Bees by the pound. Write for prices. **H. D. MURRY**, Mathis, Texas.

FOR SALE—Three Banded Italian Queens, bred from the best honey gathering strains that are also hardy and gentle. Untested queens 75c; six \$4.25; 12, \$8.00; tested \$1.25; six \$7.00; 12, \$12.00. For select queens add 25c each to above prices. Breeding queens \$3.00 to \$5.00 each. For queens in larger quantities write for prices. **ROBT. B. SPICER**, Wharton, N. J.

QUEENS bred from Doolittle's best stock, untested 60c each, \$6.60 per doz., \$50 per 100. Same stock of one-year-old queens removed from our colonies to prevent swarming, 50c each, \$5.40 per doz., \$40 per 100. Delivery guaranteed. Nuclei, 2-frame, \$1.50; 3-frame, \$2.00. Add price of above queens wanted. We have a rare bargain of an apiary of several hundred colonies of bees for sale on easy terms. Particulars on request. **SPENCER APIARIES CO.**, Nordhof, Cal.

Carniolans are excellent winterers, build up rapidly in the spring, are very prolific, cap their combs very white, enter supers readily, and keep their colonies strong at all times. Write for our FREE paper "Superiority of the Carniolan Bee," explaining more fully, giving briefly best systems of management. Untested queens, \$1.00 each; doz. \$9.00. 1 lb. package of bees without queen \$1.50, with queen \$2.50 in June. **ALBERT G. HANN**, CLINTON, N. J.
Carniolan Queen-Breeder

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. **PEARL CO.**, Clintonville, Ct.

FOR SALE—100 second hand 8 and 9 frame hive bodies at 20c each. Write for description. **C. D. TOWNSEN**, Stickbridge, Mich.

30 DISTRIBUTING HOUSES FOR LEWIS BEEWARE

Send for Annual Catalog which will tell you who is your nearest Distributer. **G. B. Lewis Company**, Watertown, Wis.

YOUR NAME AND ADDRESS on 100 envelopes 30c; on 100 sheets writing paper 30c. All postpaid. PEARL CO., Clintonville, Conn.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR SALE—Flemish Giants Rabbits, 3.00 per pair. Guinea Pigs, \$1.50 per pair. White Rats 50c per pair. Address W. H. TOWNSEND, Hubbardston, Mich.

FOR SALE—100 Heddon hives and fixtures to run a 100 colony apiary. Bargain to clear out. Address MRS. R. L. GRAY, Lapeer, Mich., R. F. D. 4, Tel. 246—R 11.

WANTED—Immediately a reliable man of good habits to work with bees. State age, experience and wages first letter. We furnish board. THE ROCKY MOUNTAIN BEE CO., Forsyth, Montana.

FOR SALE—Eight Little Wonder Bingham smokers at a closing out price of only 40c each, or two for 75c. Add postage for 2 pounds to go by mail. Address Mrs. W. Z. HUTCHINSON, Flint, Mich.

BEE-KEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man, W. D. SOPER, Jackson, Mich.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

ITALIAN QUEENS

Beginner's outfits and other supplies. Send for list. Address

ALISO APIARY CO.,
Glendale, California

In answering advertisements in the Review, kindly say I saw your advertisement in the Bee-Keepers' Review.

HONEY

Finest White Clover Extracted Honey, in 10-pound friction top pails, 6 pails in a wooden shipping case, at only \$6.50 per case. Same, Amber at \$5.00 per case. All f. o. b. Kinde. Address

Woodhull Honey Co., Kinde, Mich.

See California

and her two great Expositions
FOR ONE DOLLAR

California will hold next year two great universal Expositions, one at San Francisco and the other at San Diego, in celebration of the completion of the Panama Canal and the joining of the Atlantic and Pacific Oceans.

To supply the demand for reliable and authentic information on California and these two Expositions, we have published two guide books; one on San Francisco, the Exposition and Northern California; the other on Los Angeles, San Diego, the Exposition and Southern California, also a lithographed view of San Francisco in colors (size 30x45 inches) a picture of the rebuilt city, including the Exposition. Each book is 6x9 inches, contains 150 pages and beautiful illustrations.

These two books and view give a comprehensive, honest history and description of the State, her principal cities, resources and her two great Expositions. Sent postpaid for a one dollar bill, money order, draft or check. North American Press Association, 1458 Hearst Building, San Francisco.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1.00**

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Just put your name and address on a postal card and get my new Separator book free.

Saves \$35 to \$50

On the latest, most modern, most sanitary cream separator built. Gearing runs in a constant bath of oil and all enclosed, dust and dirt proof. Closest skimming, new type disc bowl. A lot of New Sanitary features not found on other makes. One-half the price of the old style, cumbersome machines selling through agents and dealers. Buy direct from factory and save big money. Get my new Catalog. A postal brings it.

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30 Days FREE Trial

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LEWIS HIVES ARE BUILT LIKE FURNITURE
ARE PERFECT IN ALL RESPECTS

Send for Annual Catalog which will tell you who is your nearest Distributer.
G. B. Lewis Company, Watertown, Wis.

Bee-Keepers Attention

GREAT REARING OF ITALIAN QUEEN BEES

Guaranteed Purenness of Race Selected With Proof.

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FRATELLI PIANA

CAVAGLIETTO --- NOVARA (ITALY)

<i>Prices of the Queens for 1914</i>	-	Untested	\$1.50
		Tested	2.00
		Breeders	3.00

Cash with orders. Safe arrival guaranteed of all the Queens sent post free. Death Queens lasting travel they have replaced, provided we returned sudden the box not opened.

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E. D. Townsend & Sons

Northstar, Michigan

Producers of a superior quality of White Clover
Basswood Blend of Extracted Honey

10 Yards

More Than 1000 Colonies

Our White clover and Basswood blend of extracted honey is gathered from the old, well cleared farming country of Gratiot County, where but little foreign matter is stored with the clover, so we can offer a honey of almost clear White Clover Basswood-blend of excellent quality. Put up as fast as extracted, thus retaining nearly all the volatile oils, thus retaining that beautiful aroma and bouquet so very desirable in table honey.

As usual, we will select some of the very best and whitest of this superior stock, put it into new 60 lb. net tin cans, deliver it to our station here for an even \$12 per case, containing two cans, 120 lbs. net. A liberal sample free.

Address with remittance

E. D. TOWNSEND & SONS,
NORTHSTAR, MICHIGAN

QUEENS

QUEENS

Bees by the pound and full colonies

From a superior strain of **THREE-BANDED ITALIANS**. Hardy, gentle, and they are hustlers. Guaranteed to please you.

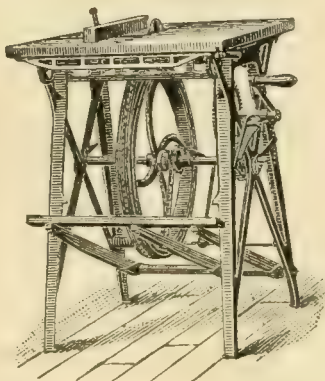
Send for my 1914 descriptive catalog.

I have a large stock of modern **BEE SUPPLIES** always on hand. **ROOT'S GOODS** at factory schedule of prices packed and delivered to my station. All orders will receive prompt and careful attention.

EARL M. NICHOLS

Lyonsville

Massachusetts



MAKE YOUR OWN HIVES

Bee-Keepers will save money by using our **FOOT POWER**

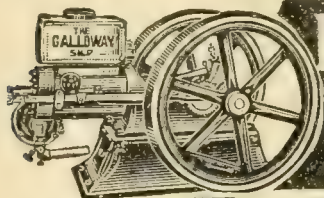
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in making their hives, sections and boxes. Machine on trial
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Galloway Engines Are Made in Sizes from 1 3-4 to 15 H. P. Twenty-Four Different Models

Yes Sir! Try It 30 Days on Your Own Farm at My Risk

It's got to please you entirely or it won't cost you one cent. My guarantee is printed in black and white and says "Satisfaction or your money back" with all the freight charges paid. Galloway engines are high quality engines selling at the lowest price ever made. Five years ago when I came out with my engines, dealers were asking \$250 to \$300 for inferior 5 h. p. engines. I've made them come down in price, but today they can't anywhere near meet my new prices. Get my catalog and see the proof.

My Direct from Factory Plan Saves You \$50 to \$300

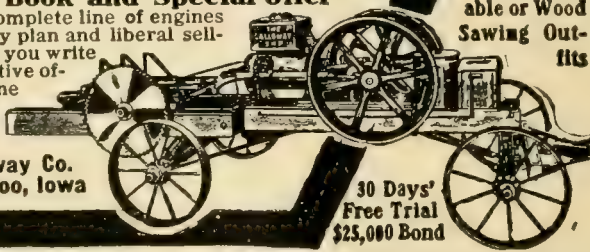
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**National Bee-Keepers' Association
NORTH STAR, MICHIGAN**

The Temperature of the Honeybee Cluster in Winter

By E. F. Phillips, Ph. D. and George S. Demuth

(Continued from page 283)

temperature continued to rise, the cluster temperature increased still more rapidly, until at 8:15 a. m., March 11, it reached 93° F. (room temperature, 64.2° F.). A little brine was now turned on, sufficient to lower the temperature gradually to 58° F. at 9 a. m., March 12, and it again rose to 63.3° F. at 5:45 p. m., March 15. During this period the cluster temperature followed the room temperature, but remained constantly over 20° warmer. The room was again cooled slowly, and the cluster temperature dropped until on March 16, at 3 p. m., the room was 49° F. and the cluster 77.5° F. As the room continued to cool, the cluster temperature increased, the bees responding to the colder temperature, until at 4:15 a. m., March 17, the room was 48° F. and the cluster 88° F. The room then gradually warmed, and again the temperature of the cluster dropped and then again rose with the room temperature, remaining always over 20° warmer. At 6:45 p. m. March 19, the brine was

turned on full and the room cooled rapidly, reaching the minimum of 13° F. at 9 p. m., March 20. At no time, however, did any of the thermometers in the hive record a temperature below 33° F. Here it remained constant within 0.1° F. for about six hours, during which time the cluster temperature varied between 86.5° and 89.5° F. (a difference between the room and the cluster temperatures of 73° to 76° F.) The brine was now shut off and the room again warmed until 9 a. m., March 24, when it reached a temperature of 44.5° F. During this warming the cluster cooled until at the close it was varying between 72° and 79° F.

As stated above, the colony was now (9 a. m., March 24) removed for a flight and put back the same day at 7 p. m. In the meantime the room was cooled to 33° F. When the bees were put back into the room the temperature of the entire inside of the hive showed great variation and naturally an increase due to the warming up while out of doors and to the activities of a good flight. The points outside the cluster dropped rapidly, but it was midnight, March 25 (31 hours), before the curves of temperature again appeared normal. The room was slowly warmed to 63.2° F. at 6:30 p. m., March 26, and then slightly cooled to 54° F. at 6 a. m., March 27, and again warmed to 58.5° F. at the close of the series 4 p. m., March 28. After the flight the temperature of the cluster never dropped below 89.5° F., and the highest temperature reached was over 95° F. (soon after the flight.) Thermometer 6 remained high, but thermometer 2, which had previously been high, now approached the other thermometers, probably due to a rapid loss of bees and to a decrease in the number of bees during the flight. It must be recalled that these bees had been confined for an abnormally long time and were subjected to treatment which is at least unusual. After this colony was taken from the room for the last time it was found that thermometer 6 was over a patch of larvae, and, estimating as accurately as possible, the eggs from which these hatched must have been laid at the time when the room was coldest (March

20-21) and when the cluster temperature was at its highest point. There had been no brood previously, according to the temperature records as compared with those of this colony earlier and with those of other colonies, nor was there much evidence of increased heat production due to the presence of brood until after the flight. Probably no extra heat was produced for the eggs, and possibly the hatching of the eggs was somewhat delayed by the low outer temperature. The effects on the cluster temperature which might be expected from a flight, in relieving the accumulation of feces, were not observed, because brood rearing had been begun.

Colony No. 3 was placed in the constant-temperature room October 12, 1912, after a good flight, and readings were begun on Monday, the 14th. In all, 2,165 temperature records were made on Colony 3. The stores provided this colony consisted of honeydew honey, which was gathered in the department apiary and which, since it granulated almost at once, had been removed by melting up the combs which contained it. After this operation it remained liquid. During the summer of 1912 some of this honeydew honey was fed to a colony in the open, during a dearth of nectar, and was stored in new combs above the brood chamber, in which no cells of pollen were to be found. After the second storing the honeydew honey was clear, well ripened, and did not granulate. This colony was also in a 6-frame hive, as previously described, and contained five thermometers (Nos. 14-18) among the combs. It is of course well known to beekeepers that honeydew honey is not a good food for winter.

When this colony was first put into the constant-temperature room it behaved much as did Colony No. 1, except that the temperature varied between 69° and 78.7° F. for the first week, being slightly higher and more variable than that of Colony No. 1. The second week it remained much the same, the temperature, however, varying between 69° and 80° F. From this time on the temperature of the center of the cluster rose rapidly, never dropping below 79° F. from October

29 almost to the close of the readings. After November 4 the temperature remained above 86° F., and after November 11 it dropped below 89° F. only twice until the end. Thermometer 17 at first read about 4° below thermometer 14, but after November 11 they were close together until November 25, when thermometer 17 began to cool rapidly, due to loss of bees, and after November 30 thermometer 14 cooled rapidly until, on December 9, it showed that no more bees remained alive. From December 2 to 7, inclusive, there was little heat generated, due to the scarcity of bees. It is of interest to observe the records of thermometer 16, near the cluster, but usually outside of it. It at first showed a temperature but little higher than the two thermometers away from the cluster, but on October 31 it began to rise until, on November 12, it reached 80.5° F., when it was doubtless covered by the bees. Even the two thermometers (15 and 18) clear to the back of the hive rose until, on November 13, they recorded 61.5° F. These thermometers showed about the same temperatures for about 10 days, and then these two and thermometer 16 showed a cooling, since the bees were dying so fast that there were no longer enough to warm up these thermometers away from the center of activity. It was to be expected that this colony would die, and the experiment was performed to learn the phenomena incident to the loss.

Before summing up the results of these two colonies, Nos. 1 and 3, it may be stated that, so far as the evidence here presented is concerned, the results as far as here discussed are confirmed by records from 10 other colonies kept in the constant-temperature room but fed other foods and otherwise different. There is in all of the records no evidence which the authors can interpret as at all contrary to the views here stated. A discussion of these other colonies is reserved.

It is evident from the behavior of colony No. 1 that at least one factor entered which gradually caused the bees in the cluster to generate more and more heat until at the beginning of the special

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Corona, California, May 15, '14.

Editors Review:—Orange bloom over and very small amount of honey stored compared to good years, Black Sage yielding a little. Cool cloudy weather the rule. White Sage and Wild Buckwheat beginning to bloom. I look for one-third to one-half crop.

L. L. ANDREWS,

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series, March 7, the cluster temperature was about 20° warmer than it was at the same room temperature at the beginning of the confinement. It is also seen that during the special series, March 7-24, the cluster temperature always remained at least 20° above the room temperature, whereas from the discussion of bees confined (Colony A) we might expect them to cease heat generation when above the lower critical temperature (57° F.). In the case of colony 3, fed on honeydew honey stores, the factor which caused more heat to be produced evidently increased much more rapidly. As stated previously honeydew honey is a poor food for winter and is so recognized. It contains the same sugars as honey, but contains in addition a considerable amount of dextrin, the particular lot fed to colony 3 containing 4.55 per cent while good honeys contain only a fraction of 1 per cent. From the evidence at hand it appears that dextrin can not be digested by bees and, whether or not this is the explanation, honeydew honey causes a rapid accumulation of feces which usually results in the condition known as dysentery, in bad cases of which the feces are voided in the hive. In the case of colony 3 the whole hive inside and out, as well as the frames and combs, were spotted badly, the inside of the hive being practically covered. Even with fine honey stores such a spotting is usually noticed after a prolonged confinement, especially in severe weather (or during brood rearing). It therefore appears that the accumulation of feces acts as an irritant, causing the bees to become more active and consequently (see later section) to maintain a higher temperature. We are therefore justified in believing that the cause of poor wintering on honeydew honey is due to excessive activity, resulting in the bees wearing themselves out and ultimately in the death of the colony. In the case of colonies on good stores (e. g. colony 1) the feces accumulate more slowly and the excess activity is not so marked and is induced more gradually. The accumulation of feces due to confinement causes, increased activity and this in turn is the cause of excessive heat production,

resulting in a reduction in the vitality of the bees.

It therefore follows that excessive activity causes the consumption of more food, resulting in more feces, so that colonies on poor stores are traveling in a vicious circle, which, if the feces can not be discharged, results in the death of the colony. In the work here recorded no attention was paid to the theory that dysentery is due to an infection, since there is nothing in the observations made that lends any support to that idea. If there is more than one kind of dysentery, as has been held, then the observations here recorded must be considered as applying only to the type which can be relieved at once by an opportunity for flight.

While the activity of the cluster is greater at some times than at others, there are not, as has been held, regular intervals of activity at which the colony rouses itself to take food. At no time is a colony kept at a room temperature of 45° F. or less in a condition which can be characterized as inactive. Presumably the reported "intervals of activity" have occurred when the colony made a noise due to disturbance by a beekeeper.

The bees in colony 3 were compelled to work constantly to maintain so high a cluster temperature. In fact, they did more work than colonies wintered in the open air. Keeping these bees in a cellar protected them from low outside temperatures, but the lack of opportunity for a normal ejection of feces caused a condition more serious than extreme cold weather. We seem to have an explanation of the fact, often observed by beekeepers, that some colonies wintered in the cellar are in worse condition in the spring than colonies that are exposed to severe cold. Poor food is evidently a more serious handicap than low temperature.

(Concluded in September Number)

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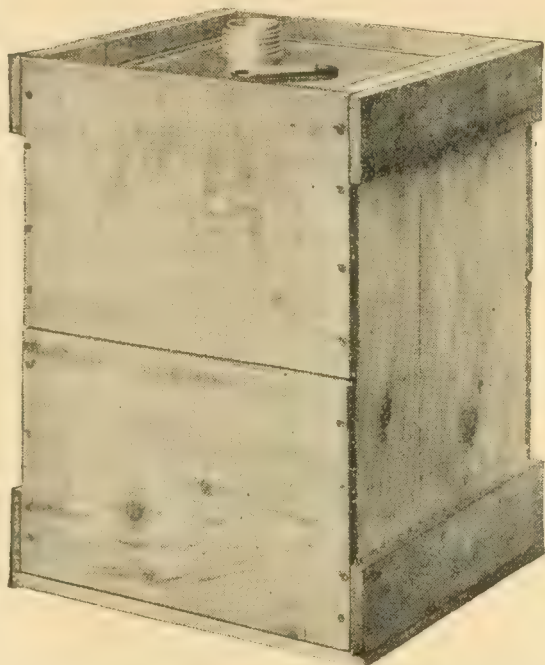
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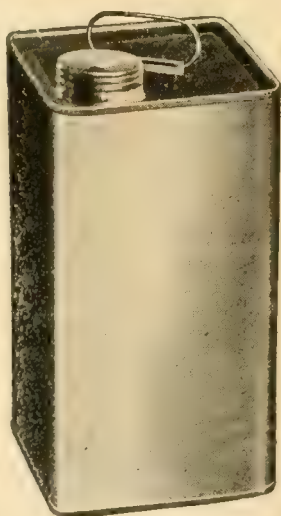
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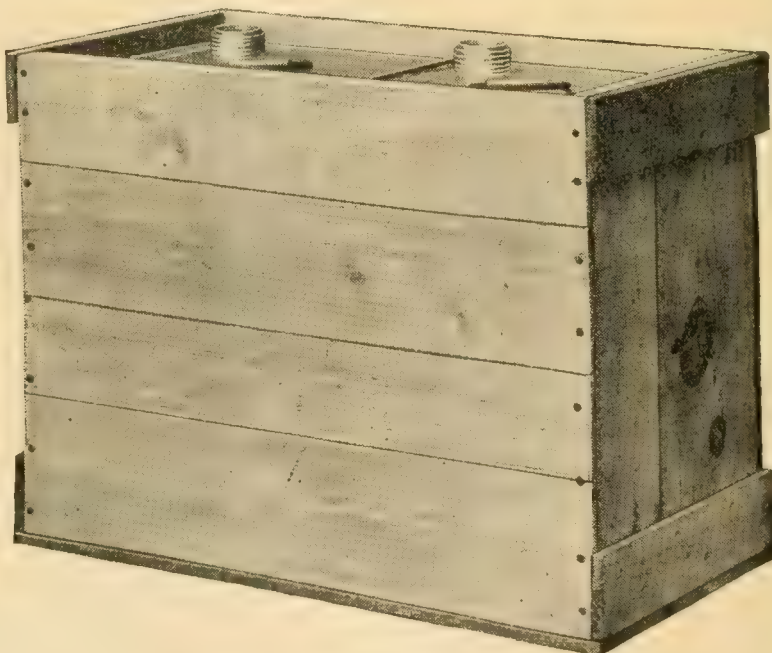
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For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT—

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES—

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1 — WINTERING—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14 which experiments will be published in this number. We shall also give our own experience summed up as to feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you cannot afford to miss such a wealth of information as the subscription price, \$1.00 will bring you.

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The Beekeepers' Review

Published Monthly

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One of J. J. Wilder's Plans of Transferring Bees from Box Hives to Movable Frame Hives Told by Picture (See next page)

The Bee Keepers' Review.



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OFFICIAL ORGAN OF THE
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E. D. TOWNSEND, Managing Editor, Northstar, Michigan

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VOL. XXVII NORTHSTAR, MICHIGAN, SEPTEMBER 1, 1914 No. 9

Management of Three Thousand Colonies in Fifty Different Yards

By J. J. WILDER, Cordele, Ga.

In a few days after I reached Cordele after my last visit to my bee business in the new field, the apiarist who was to take charge of the bees in this field came and I gave him a drill in the actual work I expected him to do. The first was that of setting up all the necessary supplies and as soon as he thoroughly understood our way of doing this he was carried to the apiary where a number of colonies were to be transferred, for this was the next work he had to do. He was made familiar with our way of transferring and our plan of immediate transfer was shown over and over again until he was familiar with it. We have illustrated this operation by "snap shots" which give a better idea than mere words. It will

be seen that this is done out in the open. The comb and honey is placed on the boards and set at the edge of the bee yard where the bees remove the honey, then the comb is rendered into wax. I give this plan especially for the benefit of the southern readers because here thousands of swarms of bees are transferred into modern hives each year and will be for years to come.

After this he was instructed in all the necessary work, the task was all clear in his mind, and he was anxious and ready to go to work. He was to transfer but a few colonies in a yard at one time and thus make his rounds until all were transferred. This done, he was to give the bees a good en-

trance at the rear of the hives as well as the front to allow good ventilation which would prevent loafing during the honey flow and at the same time greatly reduce swarming. When the main honey flow came on he was to give the bees plenty storing room, not to allow any colonies to clog their brood nest and to see that queens had plenty of room to lay. To do this each brood nest had to be examined every week during the flow. Full sheets of foundation were to be used in frames and sections. All the necessary supplies had been shipped on ahead.

Accompanied by a good helper he left for the new field while I went about the work of my home business. He was to keep me constantly informed as their progress and if difficulties came up I was to instruct how to proceed. For a while reports from the new field were good. Finally I received a letter that my plans could not be

carried out, that the situation was such that he would have to solve his own problems as he went. This did not meet my approval at all and I had miserable feelings over the matter all along, but I was fast tied up at home and could not leave. So business went on there for several months and I did not hear much about it.

Finally early in summer it came time to take off good honey in the country where my new business was. I received word that up honey was in sight and prospects anything but favorable. I knew that would not do and I wrote for him to come in and leave his helper in charge. This he did and after conversing with him about the matter I let him go. I soon could be spared from my home yard, and went to the new field to look it over. I mentioned good honey above because there had been a flow from

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The Temperature of the Honey-Bee Cluster in Winter

By E. F. PHILLIPS, Ph. D.,

In Charge of Bee Culture Investigations, and George S. Demuth Apicultural Assistant.

Method of Heat Production and Conservation.

A colony of bees in cold weather form a compact, approximately spherical cluster, but this cluster is not, as is usually believed, uniformly compact. In order to study the formation of the cluster and as an aid to interpreting the temperature records in terms of action, a colony (C) was placed out of doors in a narrow hive with double glass sides and top, and the stores were so arranged that the only space available for the formation of the cluster was next to the glass on one side, where it could be kept under direct observation. Since the bees did not have room for a spherical cluster, they formed a ring on the glass. Thermometers were then placed close together in the

outside space, so that the temperatures of various points could be determined as desired. This hive was on the roof, and, while one person watched the bees, constant communication could be kept up with the person reading the temperatures in the room below by means of a telephone, arranged so that the hands of both observers were free. This colony was of course in the light, but the normal cluster was nevertheless observed. It was disturbed as little as possible.

The nearly spherical cluster of bees consist, between the combs and sometimes above or below them, of an outer shell of bees close together with their heads toward the center. This ring may be several layers thick. The position with the heads inward is typical, except when condensed moisture drops on the cluster as it often does in cool weather, when the bees at the top turn so that their heads are upward. The bees

in this outer shell are quiet except for an occasional shifting of position. Inside this rather definite shell the bees between the combs are not so close together nor are they headed in any one way. Considerable movement, such as walking, moving the abdomen from side to side, and rapid fanning of the wings, takes place inside the sphere and when a bee becomes unusually active the adjoining bees move away, leaving an open space in which it can move freely. Two bees may often be seen tugging at each other. In addition to the bees between the combs, placed as above described, others are in the empty cells of the comb on which the cluster is always formed, always with their heads in. A verification of these statements is contained in the following observations, and the experiment may easily be repeated by anyone. For the purpose of obtaining a colony without combs for another experiment, a hive was opened December 15, 1913, while the outside temperature was low enough to cause the formation of a compact cluster. When the combs were separated the circle of bees in the shell was clearly observed. When a comb from the center of the cluster was shaken the active bees in the center of the circle dropped off readily, and those in the outer shell which were somewhat sluggish were removed with more difficulty. After this was

done those occupying empty cells in the center of the sphere backed out of the cells and were shaken off. Finally those occupying cells in the border of the sphere backed out, showing a well marked circle on the combs. Evidently the bees in the shell, whether in the cells or between the combs, are less active than those in the interior of the cluster. Naturally such a manipulation as this is not to be recommended, except for the purposes of demonstration.

It is clear from observations previously recorded that the highest temperatures are those of points in the center of this shell, and this is to be expected, as the heat is generated here. The outer shell constitutes an ideal insulator for the conservation of the heat since the bees arranged so close together form small dead air spaces in their interlacing hairs, especially those of the thorax, and afford still more insulation with their bodies. The abdomens of the bees in the outer row are practically separate one from another, and must often be exposed to severe cold. That this method of conserving heat is effective is shown by observations on undisturbed colonies out of doors. For example, on January 14, 1914, there was at 9 a. m. a difference of 68° F. between thermometers 14 (center of sphere) and 16 (outside the cluster) of Colony D

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The Production of Both Comb and Extracted Honey. Is It Advisable?

Read before the 34th Annual Convention of The Colorado State Bee-Keepers' Ass'n, Denver, Colo. Jan. 20-21, 1914.

By GEORGE F. LESTER, Delta, Colo.

In the production of both comb and extracted honey several things are to be considered. First, Location and climatic conditions. Second, Will it be more profitable? And are there any benefits to be derived from producing both? Third, Can a person afford to have both outfits?.

I will speak only of my own location, where the springs are cold and backward and the bees do not build up rapidly. I am a comb honey producer, and I use the extracting outfit that I may get more comb honey. Every comb honey producer in my part of the state knows that about one-half of his colonies will

not start in the supers as rapidly as the other half, owing to the queens not being so prolific and the swarms not being strong when the honey flow starts.

We will start with a cold backward spring, which is the rule and not the exception in our country. The bees are not building up very fast when the alfalfa begins to bloom about June 10. One half of the colonies have not over three or four frames of brood, and the queens are just starting to do their best work. The flow comes on with a rush and lasts about two weeks, and in a week those light swarms have the hive full of honey and no room for the queen to spread the brood nest, and when the main flow comes on about August first we still have a light swarm.

The way I do is to put extracting bodies with drawn combs on all light swarms as soon as the honey flow starts. All the first honey is carried above and the queen has the lower hive all to herself, which she soon fills with brood and by August first I have good strong swarms.

As soon as the first flow is over I raise the extracting body, and place a comb honey super under it, and in a few days take off the

extracting body and the bees go right ahead at work in the super, and I get one-half more comb honey than I would if I had not put on the extracting body. And I have from twenty to thirty pounds of extracted honey besides.

Then toward the end of the season when I do not know how much longer the flow will last, and a super is finished and I know they will not have time to fill another, put on the extracting body. In this way I do not have so much unfinished comb honey.

Another time when extracting bodies come handy, is when we have a real warm spell in April and early in May, when the bees are getting a little honey from fruit bloom and the strongest colonies get ready to swarm early in May. After fruit bloom there will be no honey flow for three or four weeks and I do not want any swarms at that time. I put on an extracting body with drawn combs and they forget all about swarming, and if a queen is a good one she will have four or five frames of brood in the upper story when the honey flow starts, and I use this brood for starting new swarms or for building up light ones. For these reasons, I think it is profitable to run for both extracted and comb honey, when your specialty is comb honey.

Cumberland, O., July 20, 1914

Friend Townsend:—We have a little the completest failure here this year I have ever seen. I haven't taken a single section of honey and none to take. There isn't as much honey in the hives now as there was May 1st and nothing in prospect, I don't know how much honey was produced by others last year. I have the largest apiary within fifteen miles, and got the largest crop ever produced in this locality last year. I would like to sell my bees and supplies on hand and quit the business.

Yours,

ED BLACKSTONE,
Route 4, Cumberland, Ohio.

My Dear Mr. Townsend:

"Permit me to congratulate you and your associates on the improvement in the Review. It is 'coming back.' It is a tough job you have,

much like trying to lift ones self with ones boot straps."

The above copy is the first paragraph of a letter just received from that noted writer and author, Arthur C. Miller, Providence, R. I. We would call Mr. Miller's attention to the fact that it is not so much the Editorial management of the Review, as it is the good support of its readers in furnishing so many valuable articles for its pages. Take this September number for an illustration: Two articles on wintering of bees are likely as good as ever printed upon the subject of indoor wintering. Then there is more on the "Smoke Method" of direct introduction of queens by yourself, likely the best method ever given to the beekeeping public. Then there is the Wilder article setting forth what can be done with bees on a large scale.

Editor Review:—I just read Mr. Vollmer's suggestion, that we change "Keep More Bees" to "Eat More Honey." and your reply.

I do not know where Mr. Vollmer lives nor how much honey he produces, but if a man like myself, 60 years old and a confirmed asthmatic, hardly able, at times to clip a queen, can, as I did this season produce an average of 300 pounds of honey to the colony, extracted, and sell the last pound November 1st, it seems others can do as well, or very much better.

I commenced the season with little bunches of bees no bigger than my fist, owing to a series of abnormal winters and summers but by nursing them and using Chaff Hives, I had good colonies the first week in June. However, I had an abnormally long honey flow, from May 25th until late in August, in fact, it was September before my bees would pay any attention to honey lying around in the yard. I have to thank Mother Nature for the honey, and the lucky choice of advertising matter for the sales.

I am located in a town of ONE HUNDRED souls and some bodies. Is Mr. Vollmer situated any worse to sell a big crop? I averaged better than 10c NET for my honey. Next year the price will stiffen a little.

If the REVIEW was to be circulated among the laity "Eat more Honey" would be all right, but in the name of Mike why advertise honey to the producers of it? What? It does not look like good business to me. Moreover, "Keep More Bees" has a sentimental place in the REVIEW, besides being a mighty practical saying. I say don't change it.

So soon as I can get to print some cards I shall send Mr. Vollmer some. I'll agree to sell, locally, any good crop of honey and take my pay at the rate of one-fourth of a cent a pound, if the producer will follow my copy. Honey can be advertised, LOCALLY, to sell at a good price, but not by putting "Eat More Honey" in a magazine the consumer never sees.

Yours truly,

DR. A. F. BONNEY.

Seeding for Wet Pasture Land

A South Dakota correspondent writes:

"I am thinking of sowing some sweet clover in a slough or pasture that has been tiled drained, and on some other wild land that is a little bluffy, along the creeks. I thought that by seeding the sweet clover I would get more pasture, and that the root system would help in the slough. I was thinking of putting in the sweet clover with a drill just as the frost is going out. What do you think of my plan? Which kind of sweet clover do you recommend, the yellow or the white? Should we use hulled or unhulled seed? How many pounds do you sow to the acre? On what kind of land do you advise seeding sweet clover? If you could advise something better on this land, please tell me."

On the low land we suggest that our correspondent drill in, just as the frost is going out, an acre seeding of about eight pounds of hulled white sweet clover seed, three pounds of alsike clover, three pounds of red top, and three pounds of timothy. Sweet clover and alsike clover both stand wet land better than red clover and alfalfa, but neither of them will stand such excessively wet soil as red top or slough grass. Ordinarily it is best to seed fifteen or twenty pounds of hulled sweet clover seed to the acre, but in the low wet pasture we would not use nearly this much. If the unhulled seed may be bought cheaply, it may pay to buy it rather than the hulled. But it must be remembered that the unhulled seed germinates much more slowly much of it not coming till the second year.

On the bluff land we would expect the sweet clover to do rather better than on the low land. We would be inclined to use a mixture of about eight pounds of sweet clover, four pounds of red clover and three pounds of mammoth clover. Our correspondnet in the Eastern South Dakota, where both red clover and mammoth clover should do well—Wallace Farmer.

In sending in your renewal, kindly ask your neighbor beekeeper to subscribe with you.

On Co-operation

By WESLEY FOSTER, Boulder, Colorado.

The Bee Journals have been telling us all along that we must improve our methods in order to produce a marketable product and I believe now, that there are thousands who do produce a fine article fit for any market. Let this work go on, we will urge it forward with all our energy, but also we must not forget longer the necessity for progressive business methods in marketing. We beekeepers a thousand miles from the fancy comb honey markets must learn how to reach those markets with our honey in as good shape as when it left our store house.

Reaching the customer and getting more than thirty per cent of what the consumer pays, must be accomplished. It may require cooperation where a beekeeper does not produce in carload lots. Let the bee men get together and agree on the size section to be used, the the grading rules to be followed, size and styles of shipping case, the grading rules to be followed, and let them appoint one man sales manager, who will do all the corresponding with buyers or dealers and let him judge the different cooperators' grading. All cooperative sales may be subject to the vote of the several interested if the number is not too large.

This correspondence will soon reveal to the correspondent the markets where the kind of honey the membrs raise can be best marketed. This knowledge of the market the special product and pack goes to is very valuable. This market must be cultivated year after year, constantly endeavoring to furnish it with choicer goods more honestly packed. Such a market will "come back" year after year.

Now the way these cooperative understandings work out is unfortunate in many cases, for no sooner have the individual members profited by the cooperation to the extent of, say twenty-five cents a case, than they get suspicious of each other, and of the managers thinking some are profiting to the others' detriment. There have been grounds

for such charges in numerous cases and to avoid any difficulty everything should be free and above board. The manager should be paid for the time he puts in and all should share alike.

By all means provide for honesty through and through and then have faith. Even though some things are not strictly fair, remember that things are better than before. The spirit of enthusiastic cooperation in an association of producers is almost priceless and will go further towards success than even bumper crops. Suspicion and distrust are and always will be fatal in the end.

If we who are cooperating for the sale of honey have markets close by, an intimate study of the way to keep honey displayed in the most prominent positions in the stores is necessary. Honey sales are much lower in volume because of unattractive labels, lack of display, cases neglected and becoming fly specked, and the honey dusty and soiled. Honey should look at all times as if it had just been brought into the store. It makes a great deal of difference whether the honey is in a pretty glass case that shows off the goods and keeps them fresh, and the same goods under the counter gathering dust on the jars and combs and hidden where no one can see it. Customers ask for sugar, potatoes, canned goods, etc., but they will not ask for honey unless it is displayed where its sight will be a potent suggestion.

Might I not make these statements without successful contradiction? It is as important for our industry that the position and display of honey in the store should receive as careful attention on the part of beekeepers as the position of honey in the winter quarters of our hives.

We say the retailer should attend to that display of honey, but you will notice that the corn syrup salesmen line up a half dozen original cases along right in front of the counter and then will pile out

several cases of goods in the different sizes of cans on top of these cases and they don't forget price and motto cards, either. You cannot enter the store without seeing a half wagon load of corn syrup just begging you to take it home.

Another proposition I will make is that we should put about as much attention on the providing of a dust, fly, and leak proof display case for comb and extracted honey as we do on a winter protection case for our bees. We should not neglect either and we can provide for both.

The third proposition is that it will pay us as well to stimulate

our honey customers, through leaflets, advertising, etc. as spring stimulation or manipulation of our bees. It is as important for the grocer to know where to store honey safely as it is that we supply a good super for the bees to put the surplus in. Beekeepers owe it to themselves to make it as easy for the retailer to sell the honey quickly as they do to secure the best of honey with the least expenditure of labor. Let's do intelligent marketing, when we have a choice article of honey. We will profit by knowing the business end of our honey as well as the business end of our bees.

EDITORIAL CORNER

If each member would send in one subscriber to the Review and National member each year, how our membership would grow. This does not seem so very hard to do and wouldn't be if all would put their shoulder to the wheel and push.

If you think that the NATIONAL should be operated along different lines, if you have any idea that you could better the management in any way, now is your time to make your suggestions known, so they can be published in the November Review, then your suggestion can be acted upon at the Delegate meeting February, 1915.

A few weeks ago we had the pleasure of a visit from that Pioneer and Prince of Beemen, Mr. Oscar Ogden Poppleton, late of Stewart, Fla. Mr. Poppleton for years the most fertile and voluminous correspondent of the bee journals of any writer from the Southland, has just sold out all his apiarian interests in Florida and will henceforth spend his summers in the north (probably in Iowa) with relatives, and only come down to Florida for the cold months, his beloved "play ground" that he can not leave altogether.

Mr. Poppleton, slight of form

and always delicate of health, has accomplished more than many huge giants of towering height and a mountain of strength. He has learned how to save himself, to conserve his strength and use his head for his hands wherever possible. Always a keen observer, he has formed the habit of exactness, that is a joy to experience or know. He always PROVES OUT a theory before he breathes a word of it and does not say "DOES," though we should use past tenses now, does not rush out to herald broadcast his latest theory, but waits for further corroboration to prove or disprove his ideas. As a result we feel a confidence in all the utterances of Mr. Poppleton that is not present when we talk with many a beeman less careful in his statements or less accurate in his observations. Mr. Poppleton is three-score years and ten and then some but he is 77 years young, not old. He walks like a young man. There is an elasticity and a spring in his step that even Dr. Miller would enjoy and appreciate. And both Dr. Miller and Mr. Poppleton seem to grow mellow and sweeter as the years are piled on them. May the bee fraternity of our great land have many more years of these peerless fathers of immortal youth, and may still other nestors arise, when these are gone, to lift the

torch of ripened experience a little higher with each succeeding generation.—E. G. B.

The Honey Crop Report

Since our August number went to press it has developed that there is a considerable area of usually good honey producing territory that has been too dry for best results. There is hardly a White clover producing state but reports some entire failures. It looks now as if Indiana was hit hardest by drought and consequent failure of her honey crop, with Illinois and Ohio a close second. There is entire failure of crop in a part of the states of Kansas, Arkansas, Iowa, Minnesota, Wisconsin, Pennsylvania, New York and other states. Reports have reached this office to the effect that in several of the above named states, clover is killed out so there is no prospect for a 1915 crop. California will ship about an average amount east this Fall, although several locations report a failure, others have a good crop so there will be several cars for the Eastern market this year. While there is a considerable sage or high grade honey in the east, a large percent of the surplus reported thus far is of an amber color, although of fairly good quality for table use. The Alfalfa district of the west is having a usual crop with an increase of bees, so more honey than usual can be expected from that source. Reports from the gulf states show a normal to good crop of surplus honey this year. At home here in Michigan we have crops all the way from a failure to the best ever. The southern portion of the state reports all the way from a complete failure to an average crop, while the Northern portion has crops of honey varying from ordinary to better than usual. Our bees are located on the "divide" and we secured a crop not so small as the southern counties and not so large as the Northern counties. Although not all extracted yet this 18th day of August, think our average will be not far from 60 pounds per colony of extracted honey.

An Opportune Time to Advance the Price of Honey at Retail

Nearly all food products have

advanced wonderfully of late. Especially has sugar advanced until it now sells for twice what it did a month ago. Honey should sell at retail for a consideration more than heretofore to keep up with other advances. Beekeepers' supplies have also advanced during late years, as have nearly all commodities, why not Honey? One fifty per gallon, or ten pound pail in some cases is none too cheap and is not enough at times for best table stock.

Important Notice

Many producers will find themselves short of honey to supply their customers this season on account of drouth or other causes that make their crop short. To hold one's customers and keep them in the habit of eating honey, a stock should be bought to supply this demand. To those members who are short of honey and want to buy of their more fortunate brother to supply their home market, we will list under a heading of Honey Wanted, free of charge. This list if well patronized ought to help both the one who is short and the one who has honey for sale. This free list will be open to producers only. Dealers will be listed at the regular advertising rate of 50c each issue.

In two months: In the November number of the Review MUST be published any changes thought best to make in our Constitution.

At this time the suggested changes to the Constitution worked out by the Delegates at the St. Louis meeting will be published along with any other reasonable suggestions that may be presented before that date. Officers: especially local Secretaries who know the wants of their individual branch should take advantage of this opportunity to make their wants known. Remember that this is the last opportunity you will have to offer suggestions to be acted upon at the annual convention next February. We know of no reason why individual members cannot make suggestions as well as officers. Let them come along.

The Vogeler plan of strengthening foundation by painting the foundation with beeswax along to-

ward the top, where it is more likely to sag, is likely the best and most practical way of preventing brood foundation from saging that is known at the present time. Use four horizontal wires rather loose in the frames to hold the foundation true in the center of the frame, then coat with a thin coat of wax a space of an inch or more along under the top bar where the sag usually occurs, will make perfect combs. So several say who ought to know. The process is patented, but Mr. Vogeler offers to allow each member of the NATIONAL use of his method on five swarms without charge to try out the system. It may be well to try out this method, as horizontal wires do not prevent the saging of foundation to any considerable extent.

The Louisiana State Beekeepers' Association was formed July 11th, at Shreveport, La. The officers elected for the ensuing year are as follows: President, G. Frank Pease; Vice President, W. S. Carey; Secretary-treasurer, L. T. Rogers, all of Sheveport. Another meeting will be held during the State fair and all interested beekeepers are requested to attend this meeting. In case it is impossible to attend in person, send your dues and subscription, \$1.50 to the Secretary previous to this date as a NATIONAL branch is expected to be formed at this time.

Sell Your Honey at Home

The beekeeper who sells his honey at home is the fortunate one. Especially, is he fortunate if he sells direct to the consumer at a reasonable margin over wholesale prices. It is mighty hard to convince some producers that it is absolutely necessary to ask more for one's honey when sold in small lots than when jobbed out in quantities.

The Price to Ask

If best white honey jobs at nine to ten cents a pound, it ought to retail in five and ten pound friction top pails at 15c a pound at least, and some good salesmen get twice the jobbing price at retail, in those size pails.

How to Tell the Cost of Selling at Retail

To determine the cost of selling honey at retail, above what it would cost to box it up and ship in 60 pound cans, charge the honey to yourself at what you would be willing to take for it delivered to your station. Now charge yourself and team going wages to sell on the road, keeping track of all expenses. To this you must include the putting up of the honey in smaller packages for the retail trade. Then there should be some little profit included or one would soon get tired of working for such small, or common wages.

If one is away from home, on expense, likely honey cannot be sold for much less than 100 per cent above jobbing prices, and leave a margin sufficient to carry on the business.

The producers who sell their honey at retail year after year, and STICK TO IT ask a good round price, or some day they will decide there is more money to job it out in a lump and done with it.

The Review Debt Must be Paid

Those of you who have read the Secretaries' report in the last number of the REVIEW have noticed that the Delegates at the St. Louis convention left it with the Directors to sell the Review to the best advantage if the financial condition does not warrant it's being published. In other words, the Review MUST BE PAID FOR forthwith, as the NATIONAL does not care to be in debt.

The Review Debt Subscription List Lagging

It will be noticed by referring to another column of the Review that but \$123.25 has been subscribed toward paying off the debt, and this DURING A WHOLE YEAR. Wake up, members, or you will certainly some of these fine mornings, read through some other bee journal (the Review being no more) that the Review has been sold and that the NATIONAL now has no official organ. That it all came about by the indifference of the National members. The amount, \$576.75 still due on the Review is insignificant compared

with the number of members we have and it would be a disgrace to the association to allow it to be sold for so small an obligation. Come on members! We have the

balance of the year to do something along the line of raising this debt. You who have good crops can send in five or ten dollars without noticing it. Let it come forthwith, lest it be too late.

Selecting a Location for Outyards

Bee Keepers' Review:—Enclosed please find P. O. money order of \$1.00 for my renewal to the Bee-Keepers' Review. I am a little late with my renewal but I hope you will kindly excuse me.

I must say I like the REVIEW all right and it is a great help to me. I am very much interested in Mr. Wilder's writings about his many out apiaries as I myself have an intention to increase in the Bee-Business and start an out yard about seven or eight miles off from where I live now, but do not know how to go about it, that is whether one should lease, rent or buy the land he intends to locate on and also what the general terms are in such cases between the two parties concerned. You would do me quite a favor if you would write an article in the near future on the above given subject headed something like "Starting an Out Apiary." where you would treat all the phases of starting such an outyard.

Thanking you in advance for such a favor and wishing you the best of success.

I am very truly yours,

AUGUST THOMMEN.

Member Thomen: We do not buy the ground to set our outyards upon, although there would be no disadvantage in owning it, except as it often happens the location changes and we are compelled to move to greener fields. If you have confidence in your proposed new location and condition would warrant, there is a considerable advantage in owning the property you locate your outyard on. These advantages are so apparent, that one need not dwell upon them at this time. As we have already rented three parcels of ground this spring upon which we will set three different yards, the experience is fresh upon our mind how we go

about it. The first requisit in the new location, is the forage for the bees to work upon. This is some times rather hard to determine, i. e., which is the better location for best returns. This brings to mind our Manchester yard; with Alsike galore, likely three times as much as at any other yard, still no better results are obtained at this yard, than at other, apparently less favored location. After deciding upon the location you prefer to set your outyard, the next move is to find a sheltered "nook" to locate the apiary in. This nook to be ideal should be protected, preferably by natural forest on the North, East and West sides, a wedge shaped opening to the South. After finding this favored place, just as likely as not when you approach the owner you will not be able to rent it. Just at this point a little "tact" comes in play, for you must not give up at the first answer, as favorable and sheltered locations are few and far between and when found one can hardly afford to give them up simply on account of some "whim" of the owner. Usually our locations are in pasture lots, which usually includes the wood lot. We explain to the owner that we have had bees in pasture lots, for years that stock of all kinds soon get used to the bees and avoid stings; that a pasture field containing bees produces much more pasture than otherwise on account of meriods of dead bees being constantly dropping upon the ground enriches it. That the bees are of great assistance in pollenizing his and nieghbors' fruit of nearly all description, that a full crop of clover seed in not usually acquired without bees to pollenize the blossoms. Then we tell him of fruit growers who have had us move bees to their farm, especially

for this purpose, charging us no rent, feeling that they were well paid for what little trouble we made them by the more complete pollinization of their fruit and clovers. We sometimes have the owner call up by phone, some one who has had our bees upon their place before, and ask them what, if any, trouble they had had with our bees among their stock or otherwise. This usually settles it and we are allowed to put them there for one trial year, which we know means as long as we care to keep them there, as no trouble is ever experienced along this line. The ground being rented, we move one of our 12x16 ft. sectional houses and set it up at that point. About the middle of May we usually move the bees. To prepare the bees to move the bottom board is stapled on with box staples, then a screen is placed over the top, after removing the cover. No other precaution need be taken at this time, as the screen over the top will give them all the ventilation they will need. The

screens are nailed on the day before moving and entrance blocks cut to fit with nails started so they can be closed up the next morning with dispatch, before the bees begin to fly. A flat rack on the big wagon with 4000 pounds bolster spring is used to move on. Fifty swarms decked two deep make a load, including the flat covers which are packed in around the hives to make all solid. You can move bees just as well without springs, only you have to drive a little more carefully, especially, where it is stony roads. Unload your swarms upon the stands you expect to leave them during the season, drive your team away and immediately open the entrances. You can remove the screens from the top at your leisure, but remove the entrance blocks. This is very important. The above instructions are for May moving in the North. We will call upon our Editor in Florida to tell us how to move bees in the South, for there is likely a difference.—Ed.)

Field Notes From Iowa

By J. W. STINE, Salem, Deputy Inspector for Iowa

The demand has been so great for the second annual report of the state inspector that the supply is nearly exhausted and requests for copies outside the state cannot longer be granted.

There were not as many present at the field meeting at Mt. Pleasant as was anticipated for many of the bee-keepers are farmers and were threshing and could not attend. However there were about 50 in attendance and the meeting was one of interest and profit to all who were present. It was voted to hold the summer meeting next season at Hamilton, Ill., at the home of the American Bee Journal and Mr. C. P. Dadant & Son, who were present, gave us the assurance of a hearty welcome.

It was decided to make the meeting a tri-state meeting and Mr. Moore of Illinois and Mr. Hole-

camp of Missouri and J. W. Stine of Iowa were appointed a committee to arrange for the meeting. The opening prayer was made by Professor Leist of Iowa Wesleyan College and the address of welcome was given by Mr. Mills the mayor of Mt. Pleasant. Nearly everyone had the same tale of woe to tell of it being too dry for the bees to do much in the way of surplus honey this season.

Some new members for the Iowa Association were received at this meeting.

The Iowa Bee-Keepers' Association is planning for the best bee-keepers meeting ever held in Iowa to be held at Ames next November, the 17th, 18th and 19th. This is earlier than usual, but it seemed necessary to select an earlier date in order to avoid conflict with other gatherings. The afternoon sessions will be given over to a short

course in bee culture, in charge of the college officials. There will also be held a hive products show and every bee keeper is urged to contribute something to its success. Bring samples of your best product and enter the competition.

It is hoped Prof. Bartholomew will be able by that time to complete a standard*of perfection for the judging of queen bees to present to the association as a standard of judging future exhibits within the state.

Field Notes From Tennessee

J. M. BUCHANAN, Franklin, Tenn.

This has been the poorest honey season we have had in several years, very little rain has fallen since April, and as the young clover was damaged by the dry weather last fall, there has been very little for the bees to work on. Many localities report a lot of dark honey-dew, thus spoiling what good honey there was. It is safe to say there will not be half a normal crop of honey harvested in the state this year.

* * * *

Never before this season have I been so impressed with the advantages of large brood chambers prior to the honey flow. The colonies wintered in two-story hives built up rapidly, and very few made an effort to swarm, although running over with bees at the beginning of the flow. The season has been too poor to give them a fair chance at honey gathering, but on an average, these colonies have stored twice as much as those wintered in one story hives.

* * * *

Our Apiary inspector, Dr. J. S. Ward is with the Agricultural Train, now making a tour of the state with an exhibit of agricultural, hor-

ticultural and apicultural products and appliances. They will visit every railroad town in the state, giving lectures, demonstrations, etc., thus reaching a large number of farmers and beekeepers who never read the Journals. Dr. Ward reports disease conditions in the state to be improving.

* * * *

"Tennessee Agriculture," a monthly journal published by the State Department of Agriculture, devotes the larger part of the July issue to beekeeping. There are some good articles on the diagnosis and treatment of bee diseases, with illustrations. Also articles on beekeeping and farming, honey plants, and the Inspector's report for the year. This should be in the hands of every beekeeper in the state. It can be had for the asking.

* * * *

See that your bees breed up good and strong for the winter. This is the principal factor in good wintering, and consequently of early and prolific breeding in the spring. If there is no fall flow it would pay well to feed a little thin syrup every day through September, to insure brood rearing.

The Secretary's Corner

GEO. W. WILLIAMS, Red Key, Ind.

I had anticipated much pleasure and profit in corresponding with the Secretaries, Officers and Producers of the different affiliated

associations, but illness of myself and family has prevented me from doing much at it.

* * * *

There is one factor that I wished very much to discuss with the associated bodies, and that is the selling end of our business. I had written several letters to producers and dealers before my illness and received many suggestions and results of great value, but lately I have been so busy that I have been compelled to forego the pleasure of a personal correspondence. But we still have the little corner in the Review. It is our own paper, anyway, and we should make the most of it.

* * * *

For some time I have given the matter of advertising honey considerable thought, endeavoring to find the way best adapted to the peculiar conditions surrounding the business, and suited to the psychological attitude of the beekeepers themselves.

* * * *

The average beekeeper has been satisfied to produce his honey and has paid but little or no attention to developing the market. As a consequence the price of honey is lower than other food products of inferior value, but better advertised.

We find here and there men, who have developed their local markets, sold their own honey, good prices, and are drawing on other producers to fill their increasing orders. These men are the ones who are making the money in the bee business. Invariably we find the hustlers, talking honey, writing about it in their local papers, and giving bee and honey demonstrations at the fairs and grocery stores. This persistent effort gives them results in the ratio of their efforts.

If you do not already have them, procure some observation hives and set them in the stores with your honey, and be around occasionally and give "bee talks" and get a cage and give live bee demonstrations at your department stores and county fairs. They want sensational stunts, and will pay well for them. Give your newspapers all the bee and honey news you know, when your state Secretary calls on you for co-operation, give him your best efforts—push HONEY always and everywhere. The hands of the National Association are tied by red tape and otherwise, and it is up

to the individual to do the "Boosting."

* * * *

I received a letter some days ago, from a prominent producer, and he began it as follows: "Why are you so much interested in 'Boosting Honey?' He knew that I had every pound of my honey sold before it was produced, and doubtless was puzzled to account for it. When I accepted the office of Secretary, my friends asked me to ascertain if anything could be done to assist in disposing of the finished product, and suggest some plans to "boost" prices and sales. I have earnestly endeavored to do this and I find that the most successful plans are to use persistent personal effort as hinted above, and to make honey and live bee demonstrations at the stores. E. R. Root tells me they increased their sales in one city alone \$70.00 per month by this means alone. You can double your local sales this way at no cost at all except a little extra time. We cannot at present raise the money to advertise extensively in the papers of wide circulation, as this is very expensive, and in our case of very doubtful value. But each one of us can with slight expense very easily increase his sales wonderfully by these demonstrations.

But by all means, give your customers a really good article, so they will come again. This is one prime requisite.

* * * *

I wish I could give you all of the splendid letters I got about this matter, but they would fill this number of the Review, and at that there might be worse reading.

What They Say

George W. Williams,
Redkey, Ind.,
Dear Sir:

Your interest in the plans for the advancement of sales and consumption of honey cannot but be felt by the producer and dealer. It surely will have an inspiring and helpful effect.

We most certainly favor the observance of a "Honey Day", along about October, but I am afraid the assessment plan will give you trouble in collecting from some beekeepers.

Instill into your members the personal pride of doing the local advertising as you did in Indiana last winter. We know from experience that the newspapers are glad to give reading space to bee and honey news, and will

announce such items as a "Honey Day" free of charge.

You can depend on us to aid in this work in any way possible.

We remain yours truly,
GUS DITTMAR CO.
Augusta, Wis.

* * * *

George W. Williams,
Redkey, Ind.,

Dear Sir:

I may not be a crank on all things, but on the marketing of honey I will have to plead guilty to the charge. You will remember that I distributed 45,000 booklets, "Uses of Honey in Cooking." I advised beekeepers to have their wives make up several kinds of bakings, candies, etc., and then invite in likely honey customers for a social evening, and to sample the baking. In short, have a sort of "Honey Evening." Let me give you the result with one family in Iowa. The wife had a good supply of such delicacies ready, and when the time came, she sat them down at the table loaded with these, telling them how to make them, and giving each a copy of the booklet.

As a result, the company took home with them five gallon cans of honey, and she had contracted with the Sunday School superintendent to furnish the children at Christmas time, each a liberal cube of candied honey, nicely put up in fancy paper, in preference to the cheap candy usually given.

The advertising, resulting from this gathering has sold all their honey, and they have to buy honey from others (who do not advertise, likely) to supply home trade.

This is only a sample of what well directed advertising does. Use any way, Mr. Williams to get more people to realize that Honey is indeed the best and most wholesome sweet on the market. I would think this "Honey Day" would do much good if it was at the opening of the consuming season, with liberal advertising before. The big trouble is that beekeepers simply produce, and but few advertise their product, or educate others to its value.

Why not get every state Bee Inspector to work his state along this line, as it will not interfere with his other duties. Local effort all along the line is what will count. I AM WITH YOU. Yes, we must educate producers for better honey also.

Yours truly,
N. E. FRANCE,
State Inspector,
Plattsville, Wis.

* * * *

George W. Williams,
Redkey, Ind.,

Dear Friend Williams:

Your letter to hand in regard to a general "Honey Day", I think all the publicity we can give our products will benefit us in the increased use of honey, and am in sympathy with any scheme that will produce that result without too great cost of course.

It would be better, probably, to confine any certain date to single states or groups of nearby states, as the honey flow is not the same all over, for the extreme south will be sold out before the northern honey is nearly ready for the market. And as to raising any funds for expenses. It might be easier to raise it by subscription than by as-

essment, I do not know.

With best wishes I remain,

Yours truly,
J. M. BUCHANAN,
Franklin, Tenn.

* * * *

George W. Williams,
Redkey, Ind.

Dear Sir:

Your letter in regard to boosting the sale and price of honey at hand. Yes I think a "Honey Day" would be a good thing. I think any time in the late summer or early fall would suit, according to the latitude. I sell most of my honey before winter. My customers aim to buy enough to last until new honey comes again.

As there will necessarily be considerable expense, I am in favor of an assessment sufficient to meet this, and it does not seem to me that 3 or even 5c per colony would be excessive if the campaign would stimulate the honey market, and I do not see why it would not. The producer should have more information as to the selling price of honey than he has been able to get. Some of the quotations are purposely misleading, and others are not up-to-date.

I am afraid some dealers purposely make their quotations misleading to induce the unwary to ship to their market. A neighbor sent his surplus to a dealer, who had quoted at a certain price, and the returns were 6 or 7c less than the quotations. That man will sell his honey at home at any old price, and demoralize the local prices. How are you going to "boost" the price of honey with these conditions existing? By all means get the jobbers in line and get them to see that this kind of business is bad for the honey trade, clear down.

I remain,

Yours respectfully,
BYRON S. HASTINGS,
Brookville, Ind.

* * * *

George W. Williams,
Redkey, Ind.

Dear Sir:

I am certainly glad that some one is making an effort to make the National Bee-Keepers' Association of some benefit to its members. Before I answer your questions I want you to know that I am somewhat of a crank on this subject and I do not want you to take offence at what I may tell you.

In regard to setting apart a honey day in each state, yes, I favor this move, and as to the time of holding it, I believe each state should have their own honey day, in their own way, at a time when they have their most honey ready for the market. Our state has had a "honey day" at the opening day of the state fair, the first day of September, Labor Day. On that day we gave to about 20,000 children at the state fair a taste of biscuit and honey. The sales of honey immediately after showed a wonderful increase. During the week of the fair there were extracted, bottled and labeled 12,000 lbs. of honey, taken from nice clean combs, in plain sight of everybody. This year we will have another "honey day" but it will be different. It will be bigger.

I believe every state ought to organize a co-operative honey exchange,

where every bee-keeper would have a chance to market his honey, and eventually these should work together through the National Association.

Yours very truly,
P. J. DOLL,
Minneapolis, Minn.

* * * *

George W. Williams,
Redkey, Ind.

My Dear Sir:

Yours of the 20th received and noted, I will say that a move as you suggest as "Honey Day" any day in November or December, just before the holiday trade opens up.

I think an assessment would be the best means of raising funds for this purpose. I assure you that I will do all I can to make the move a success.

Yours truly,
C. H. STINSON.

* * * *

George W. Williams,
Redkey, Ind.,
Dear Sir:

Yours of the 22nd to hand. I can say that I can heartily endorse a move of this kind, yes, I am in favor of a "Honey Day" along about September 10th for this state, and I believe that an assessment of 3c per colony would be satisfactory to all progressive beekeepers. More would be better, but we must consider those who are a little conservative.

Giving out samples of honey on a morsel of fresh cracker or bread, bee-talks and demonstrations are the very best of aids. I always try to have these demonstrations at our county fair.

I would be glad to hear from you again as to the progress you are making.

Yours respectfully,
GLENWOOD BEARD,
Barberton, Ohio.

* * * *

George W. Williams,
Redkey, Ind.,
My Dear Sir:

In answer to yours of the 22nd, I will say that I am in favor of a "Honey Day", along about July 1st. As there will be more or less expense connected with this, I would favor an assessment of 5c per colony if necessary.

Have some placards printed and distribute among the beekeepers, who should display them conspicuously in the groceries. These placards to have on them in large letters a statement of the food value of honey compared with other foods.

Let each member make arrangements with his grocer for a honey and bee demonstration. Arrange the bees and honey in the best possible way for attracting attention. Have the extractor along and show the people just how it is done, and convince the people that extracted honey is clean and pure, and you will not only help your own business, but will be helping many children to get a wholesome and nutritious food, the best of all sweets, one they need and crave.

I had a demonstration at our fair last fall and it was a great success.

Yours,
J. E. VENNARD,
Wilmingon, O.

George W. Williams,
Redkey, Ind.,

Dear Sir:

Yours of the 8th to hand. As to a "Honey Day", I am in favor of anything that will help the sale of honey. October 1st would be about the right time here.

I am not in favor of an assessment plan as this will not be satisfactory to the conservative beekeepers. The average beekeeper has so little knowledge of the marketing of honey, that it is a hard matter to interest him.

I have learned some things in selling honey, that if I were to get up before a convention of beekeepers and tell them things that I know from my experience to be true, I would be laughed down as a fool. You can advertise honey till doomsday, but if you do not back up your statements with the goods your time and money is worse than wasted. The quality must be there, and the quality must be uniform. When the beekeepers and the honey bottlers get together and adopt a uniform standard, and a standard the public relishes, you can advertise in the general mediums and get results. This is the biggest problem before the beekeepers today.

Yours very truly,
JOHN J. BULL,
Valparaiso, Ind.

* * * *

George W. Williams,
Redkey, Ind.,

Dear Sir:

I will answer your questions as given in your letter of the 8th in the matter of marketing honey.

As to a general "Honey Day" I favor it, most decidedly. As to the time I do not think it greatly matters, except it should not be as a time when fresh fruit is in the market.

To pay the necessary expenses, to begin with, I would favor an assessment of 1c per colony. Beekeepers are a conservative set, and it would not do to ask them to dig too deeply in their pockets for the sake of an untried scheme.

I have 1000 colonies and I think \$10.00 is about all I would care to put into it the first jump. Double up as it proves successful.

Sincerely,
J. EDGAR ROSS,
Brawley, Cal.

* * * *

George W. Williams,
Redkey, Ind.,

Dear Sir:

Yes I am most heartily in favor of a "Honey Day". I think the Saturday before Labor Day would suit here. If any funds are to be raised, assess each colony of producing bees 2c each.

In addition, I would by some way provide that placards should be placed in every grocer's store, something like this.

Eat a Little Honey

Yours,
O. H. SCHMIDT,
Sec. Mich. Association
Bay City, Mich.

Office of State Entomologist,
Corvallis, Oregon

I would favor a universal "Honey Day" and as to the actual date, the beekeepers in each state should decide. I would suggest that the Secretaries of the different Associations get the railroads and hotels to feature the day in an appropriate way.

H. F. WILSON.

The Pearce method of "Let Alone" beekeeping is another instance of good support the Review is receiving from it's readers. Such support as this is what makes a good bee journal, and we take this opportunity to thank the many friends for those favors.

The National Bee-Keepers' Association

And its Affiliated Associations

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more.....Leicester, Mass

Humidity In The Wintering of Bees

By E. F. PHILLIPS, Ph. D. In Charge of Bee Culture Investigations
Washington, D. C.

Given at the National Convention in St. Louis, February 1914

In the various discussions of the wintering of bees frequent mention is made of the causes and effects of moisture in the hives and in bee cellars and this has induced considerable speculation on the sub-

ject. In spite of this discussion, the inter-relationship of temperature and humidity is manifestly not clear to the majority of beekeepers and it may not therefore be inappropriate to attempt to explain such

points as can be brought out by a brief examination of the physical phenomena involved.

The subject of the effects of humidity in wintering cannot be exhausted without an enormous amount of investigation under carefully controlled conditions, and data from such a source we do not have. The whole complex subject of wintering is now in a state of chaos because of the extreme difficulty of obtaining direct information concerning the activities and needs of bees in winter quarters. Before we are ready for investigation however we must clear the way by determining and studying the physical laws which affect the problem.

Source of Moisture in the Hive

Most beekeepers especially in the North know that under some conditions, especially in the cellar, the atmosphere in the hives in winter is so laden with moisture that it cannot all remain in the form of water vapor but condenses on the hive and combs. It not infrequently happens that water runs from the hive during the winter confinement in the cellar. What is the source of this moisture? Obviously it does not come from outside the hive for this often occurs when the cellar otherwise appears dry.

Within the hive the only source is the food consumed by the bees. Honey contains about 20 per cent water and when this is consumed this water passes from the bees in the form of water vapor. Honey consists chiefly of a solution of sugars, carbohydrates, and when these are consumed and assimilated the final products of the chemical changes that take place in the body of the bee are carbon dioxide and water. Honeys vary in composition but one pound of an average honey will, when consumed, produce over two-thirds of a pound of water. Since honey is about one and a half times as heavy as water, one gallon of honey when consumed produces one gallon of water. If now we calculate the water produced from the honey consumed during the winter, it is obvious that a well-stocked bee cellar has produced in it a relatively large amount of water.

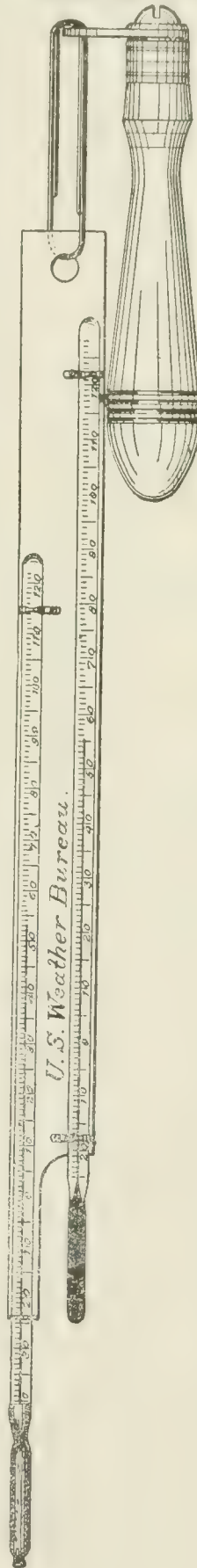
In an ordinary bee cellar, containing say 216 colonies, the aver-

age consumption of stores may, for purposes of calculation, be estimated

at 10 pounds per colony, or 2160 pounds in all. The accuracy of this estimate is perhaps open to question but it can at least be stated that frequently in poor wintering this amount is exceeded. The amount of water produced by the consumption of this honey is at least 1440 pounds or 180 gallons, enough to fill six 30 gallon barrels. These figures are calculated on the minimum water production and this estimate would probably be exceeded. According to these figures in a winter confinement of four months the changing atmosphere in the cellar must be able to take up one and one-half gallons of water a day or condensation will occur.

The Relation of Humidity to Temperature

Before discussing the phenomena of the hive it may be best to take up some facts concerning the moisture content of the atmosphere as influenced by temperature and barometric pressure. * It is of course well known that if moisture laden atmosphere is cooled, its capacity for holding water vapor is decreased and what cannot be held must be dropped. For example, the cool surface of a glass of ice water cools the atmosphere immediately adjoining it, reduces its holding



power and the surplus, which cannot be held, is deposited on the surface of the glass. These drops do not "sweat" through the glass, as the common expression would indicate, but are condensed from the surrounding atmosphere. Similarly we may have condensation when the surface of the earth is cooled and this we call "dew" if it remains liquid and "frost" if it is frozen as it condenses. Other examples come to mind at once for such phenomena are common. Dew appears not to form so readily if a strong wind is blowing for it evaporates as soon as formed. It is of course obvious that when the temperature of the air again rises the moisture deposited as dew may be taken up by evaporation. These homely examples find their exact parallels in the bee hive and bee cellar.

To eliminate moisture which leaves the body of the bee in the form of water vapor without condensation is, in brief, the problem which the beekeeper is trying to solve. This may be accomplished in actual practice by raising the temperature of the outer air, drying the air (as by the use of unslaked lime) or by causing it to move so that as the atmosphere becomes fully laden with water it will be replaced with other air capable of taking up still more moisture. Various beekeepers accomplish this by any one of the three methods, all of which are fairly successful.

Absolute humidity, or the measure of the amount of water vapor in a given space, is expressed in the actual weight of the water in this space. This is difficult to obtain directly in ordinary practice and the usual method is to determine relative humidity, that is the amount of moisture in the atmosphere compared with the maximum which might be held at that temperature. The common method for determining this is by the use of wet and dry bulb thermometers. to determine how much the wet

bulb is cooled by evaporation. From these data we then determine the relative humidity from prepared tables (see above reference).

To make clear the relation of the relative humidity to temperature it may be well to choose a few examples. For the first case, let us assume a cluster temperature of 60° F. in an atmosphere which is fully saturated. In this event the slightest cooling will cause condensation and the wet bulb in such an atmosphere (if it could be circulated rapidly) would show no cooling. No evaporation can occur as the atmosphere cannot take up any more moisture. If however the wet bulb can be cooled at this temperature the relative humidity is less as the readings of the wet bulb thermometer are lowered. The temperature to which an atmosphere must be cooled to produce condensation is known as the "dew-point." This is also lowered as the humidity decreases. These points are illustrated in the accompanying table.

Assumed cluster temperatures		Dew point	Relative humidity	
Dry bulb	Wet bulb			
60° F.	60° F.	60° F.	100	percent
60° F.	58° F.	57° F.	89	percent
60° F.	56° F.	53° F.	78	percent
60° F.	54° F.	49° F.	68	percent
60° F.	52° F.	45° F.	58	percent
60° F.	50° F.	40° F.	48	percent
60° F.	48° F.	35° F.	39	percent

With such an assumed temperature of the cluster (60° F.) only the highest relative humidities would show condensation in a cellar in which such a cluster temperature would be found.

Let us examine this from another angle. If we assume different temperatures for the cluster (all of which have been observed under different conditions by various investigators) let us see what the relative humidity of the warmer atmosphere must be not to show condensation when cooled to cellar temperature. The following table gives these data:

Assumed cluster temperatures		Dew point	Relative humidity	
Dry bulb	Wet bulb			
60° F.	52 ° F.	45° F.	58	percent
65° F.	54 ° F.	45° F.	48	percent
75° F.	58.5° F.	46° F.	35	percent
96° F.	66 ° F.	45° F.	18	percent

* Consult Marvin, C. F. 1912 Psychrometric tables for obtaining vapor pressure, relative humidity and temperature humidity and temperature of the dew-point. U. S. Dept. of Agric. Weather Bureau (No. 235) and Smithsonian meteorological tables. 3rd Ed. Smithsonian Institution No. 1032 Miscell. col. Pt. of Vol. XXXV.

In this second table the numbers are chosen so that the dew-point is practically 45° F. in all cases, assumed as an average cellar temperature. It appears that a given amount of water given off by bees at 96° F. creates a much lower relative humidity (18 percent) than the same quantity of water at 60° F. (58 percent) because the warmer atmosphere is capable of holding more water vapor and relative humidity is simply an expression of the percentage present compared with all the atmosphere can hold. However, to maintain a temperature of 96° F. necessitates the consumption of much more honey and this in turn gives off much more water vapor. Consequently with a cellar temperature of 45° F. we should expect much more condensation in a colony with a cluster temperature of 96° F. than in one with a cluster temperature of only 65° F., except that the increased heat would tend to produce stronger currents of air in the hive which might relieve the situation somewhat.*

Since 96° F. is about brood rearing temperature it is partly indicated why brood rearing during the winter confinement may be highly injurious, as it is usually held to be. It may be stated that a cellar temperature of 45° F. and a cluster temperature of 60° F. might not occur; the other temperatures used in the table might well occur under different conditions.

In making determinations of relative humidity it is necessary to take into account the barometric pressure but in any given locality the changes of the barometer are so small as to be negligible and therefore need not be discussed here. In any event in using wet and dry bulb thermometers the conversion table used must be for the right barometric pressure.

A further word of warning concerning the use of wet and dry bulb thermometers may not be amiss. To obtain accurate results the air must be moving past the bulbs at the minimum rate of 15 feet per second and if this is not

occurring naturally the thermometers must be whirled at a corresponding rate. Unless this is done the readings are entirely worthless. Great care must be taken not to read the wet bulb thermometer until it registers as low as it will fall. It is therefore obvious that wet and dry bulb thermometers hung in the bee cellar and not whirled gives no reliable data as to the relative humidity of the cellar. Many beekeepers thus use them incorrectly.*

How Moisture Escapes From the Hive in Winter

During the summer when nectar is being ripened into honey great quantities of water leave the hive in the form of water vapor. During this period the hive is being well ventilated by fanning bees so that the atmosphere is changed rapidly and, being warm, is capable of taking up more moisture than is the atmosphere of the cellar. In winter when the bees are in a cluster this ventilation by fanning does not occur, or perhaps we should say, should not occur. The amount of water that must leave the hive is much less than in summer but on the other hand it either must pass out in air set in motion by changes in temperature or will condense on the frames, combs and hive and possibly run out by gravity.

If the atmosphere of the bee cellar is heavily charged with water vapor as is frequently the case, that within the hive must be saturated. The additional water produced by the bees will therefore condense and run out the entrance. It frequently happens that the air outside is capable of taking up this moisture again by evaporation, so that there may be no water visible except within the hive, most often on the cover, and possibly also on the bottom board.

If the wooden cover of the hive

* Latham, 1907, *Gleanings in Bee Culture* XXXV, pp. 1270-1272 advises large entrances to permit the escape of water vapor in damp cellars and the restriction of the entrance to retain moisture in dry cellars.

* In Hutchinson's *Advanced Bee Culture* (4th Ed. 1911) there is a valuable chapter on humidity in cellars but the author fails to explain the proper use of the wet and dry bulb thermometers and his advice is therefore open to serious objection. If Hutchinson's advice to make the instrument for measuring humidity from two thermometers is followed, it is imperative that carefully calibrated instruments be obtained and these can rarely be had in the ordinary markets. Cheap thermometers are the source of many errors in records of bee cellars.

is loose or if the hive is covered with some absorbent or porous material, the heat of the cluster may cause the formation of slight upward air currents which will carry the moisture out the top in the form of vapor. Out-of-doors there may be condensation of moisture in the porous packing more rapidly than it can be carried off by evaporation, in which case the packing becomes wet and usually thereby less effective as a non-conductor. With sealed covers the moisture must pass out the entrance and this may also occur in the form of vapor if the outer air is of sufficiently low relative humidity to take up all the water as it comes outside. The relative merits of absorbent and sealed covers cannot be determined from such statements and doubtless the necessity for absorbent covers is not always equally urgent. The present occasion does not seem propitious for discussing this vexing question.

Effect on the Humidity of Changing the Outside Temperature

Any change in the temperature of the bee cellar may effect the humidity in two ways. As the optimum cellar temperature is approached, the heat produced by the cluster will diminish and this decreases the food consumed and consequently the water produced. The widely varying reports of the food consumed by bees in cellars find their explanation chiefly in the difference in temperature. As the cellar is cooled below the optimum not only is there more water produced but the cooler atmosphere is incapable of holding so much and we therefore have an augmented cause for condensation.

In this connection it may be of interest to record a few observations made on bee cellars not long since. The first cellar was away from any house and was without any artificial heat. The temperature of the air at the floor was 40° F. and in the center of the cellar, 41° F. There was little circulation of air and moisture had condensed freely in the chamber above the cellar proper, under the roof. In this cellar were 98 colonies in 24 tiers. Of these, condensed moisture was seen on the bottom board of 21 in the bottom tier, 11 in the next tier, 3 in the third and 6 in

the top tier. There was no condensed moisture on the floor. The only adequate explanation for the greater number of wet colonies in the lower tiers is the slightly lower temperature at the floor.* If now there had been more ventilation provided without greatly lowering the cellar temperature, this moisture might at least have reached the chamber above the cellar before condensing and doubtless if the temperature could have been raised a couple of degrees all of the condensed moisture would have disappeared from the bottom boards. There might still have been condensation on the covers, where it first appears, but this too would probably have evaporated at 45° F. with good ventilation.

In a second cellar where the temperature was 45.5° F. at the floor and 50° F. six and one-half feet from the floor there was no condensed moisture in any of the 93 colonies. Here the ventilation was much more abundant and the cellar was artificially heated. In a third cellar, temperature 40° F. five feet from the floor, there was moisture on several covers but none on the bottom boards. The ventilation was excellent. In the fourth cellar, temperature 52.5° F. no condensation was observed even on the covers. It therefore appears from these few observations that in the two cellars at 40° F. the moisture was more in evidence in the poorly ventilated cellar and that when the temperature was raised to 45.5 or 52.5° F. no condensation occurred. In this connection it should be remembered that the cellar temperature is usually higher than that of the outer air, thus giving the atmosphere a greater capacity for water vapor. For example, if air comes from the outside at 0.0° F. into a cellar where it is warmed to 45° F. its capacity for moisture is increased thereby almost eight times (barometer 30 in.) so that even if the atmosphere at 0° F. is saturated it is capable of taking up much more moisture when it reaches the cellar temperature.

The only conclusion that can

* This is also discussed by Holterman R. F., 1907, Placing Hives of bees in the cellar. *Gleanings in Bee Culture* XXXV, p. 21.

safely be made from the data on these four cellars is that concerning the capacity of the atmosphere for water at different temperatures. Other factors entered into the wintering of bees in these four cellars so that probably no reliable conclusions could be formed from data as to the food consumed⁵ by the various colonies even if these were available. In one case, the second, the bees during the following season, 1913, broke all known records for comb honey production but they were in partnership with Dr. C. C. Miller and, as you all know, that fact is responsible for the cream of the great crop that he reports for the year. These bees, now some time dead, will probably long live in the history of bee-keeping as the maximum producers. While I would not desire to detract from their glory, I insist on dividing it at least equally with their owner. Most of us would give him more of the credit than that.

In discussing the condensation of moisture in the hive and the various methods by which it may be avoided, we must not lose sight of the fact that little is definitely known as to the effects of such condensation or of a high relative humidity on the wintering of bees. From the experience of numerous beekeepers we are justified in concluding that bees winter better in the dryer cellars but it is not so clear whether this statement would hold true for all cellar temperatures. In most systems of cellar ventilation the object accomplished is not so much providing oxygen for the bees as the elimination of the exhaled moisture without too great condensation. The amount of oxygen needed to oxydize a couple of pounds of honey per month is not great. Even in a cellar in which a ton of honey is consumed during the winter, as in the theoretical case cited, sufficient oxygen would probably get in without any special provision for ventilation. This is not true for the elimination of the water however.

In discussing the exclusion of moisture from the hive it is necessary to bear in mind one other hiding place for moisture, usually overlooked. In hives where condensation is common the hive and cover often become saturated and suf-

ficient moisture may be held in this way that it comes through and blisters the paint on the outside surface of the hive. If anyone chooses to use this as an argument for not painting his hives, there will perhaps be no objection raised to its validity. Evidently propolis is not an impervious coating. It is clear that on account of this absorption of water by the hive, many records of weights on the removal of bees from the cellar fail to give accurately the loss in weight by the consumption of honey and the death of bees. Much honey finds its equivalent in the water in the soaked hive. Before drawing any conclusion as to the honey consumed we must be sure that condensation or evaporation do not affect the weights of parts assumed to be constant. A reverse example of this phenomenon is to be found in some records made of the weight of a hive and combs (without bees) made recently. The hive lost weight constantly by evaporation when placed in a dry room. Records of food consumed are really of little value unless we know the actual loss in honey and the death rate of the bees and we have no records taken with such precautions.

Effects of Humidity

It may as well be stated that we have no data showing the effects of an increase or decrease in the relative humidity on the activities of the bees in winter. We therefore do not know what relative humidity is best, for we do not know whether the moisture is the cause or the effect of poor wintering. From practical experience it may be concluded that excessive condensation is indicative of poor wintering and most beekeepers aim to have their cellars as dry as practical. Whether this is desirable for the warmer cellars remains to be determined.

Elwood* falls into a common error, in which he is probably accompanied by many beekeepers when he states that a damp cellar at 45° to 50° F. is no warmer than a dry cellar at 38° to 40° F. This

* Elwood, P. H., 1895, Indoor wintering in York State. *Gleanings in Bee Culture*, Vol. XXIII, pp. 851-852. Compare also the above reference to Hutchinson.

conception arises from our personal experience that high relative humidity gives us a feeling of chill. There is no evidence that bees with very different exteriors are so affected.

At any rate it is evident that condensation of moisture on the combs of honey is not beneficial since this favors the growth of molds. The damp dark interior of the hive is certainly favorable for the growth of these organisms. It is not yet shown how these are injurious but they can scarcely be assumed to be desirable as food. A still more serious consideration is the fact that honey tends to take up moisture either from a highly saturated atmosphere or from water condensed on the surface of the comb. This dilution of the honey often leads to some fermentation, injuring the honey as a food.

In conclusion it is evident, and in fact this is about the only point which we can consider proven on this question, in conclusion then, it may be said that we need more information on the subject of humidity and wintering. What we need is not more speculation, of which there is a plenty, but there is sore need of observations on the humidity of bee cellars and its effect on the wintering of the bees. A slight outlay for whirling thermometers (such as the one exhibited) would make it possible for beekeepers to accumulate data of great value. We need more experimenters who are not satisfied to sit at a table and aim their speculations at copy sheets but who go to the bee cellar armed with a thermometer and trained eyes, and with this equipment get facts of real value. The thermometer is more easily obtained than the trained eyes.

New York Bee-Keepers' Association

The Bee-Keepers' Review—There are a good many beekeepers in western New York. Why not try and have a branch of the NATIONAL Association here! If you will help us get started by giving us a few pointers on forming a branch, then place a notice in the Review that all beekeepers living in western New York wishing to become members of a new branch of

the National Beekeepers' Association, write to Vollmer & DeMuth, Pembroke, N. Y. for further particulars.

(There is no reason why a state so rich in apicultural resources as New York should not support several branches of the National Association. The organization of a branch of the NATIONAL is a very simple affair. The first and main procedure is to advertise it thoroughly through the bee journals and local papers. To make a convention a success, a turnout must be secured. The great mistake of most secretaries is that they do not get their dates sufficiently early to give the bee journals time to properly advertise their meet, consequently many do not know of the meeting until too late to attend. Another point in advertising a meeting, is, that one notice is not sufficient to get out a good attendance. If it is talked about for two or three months in advance that there will be a meeting of beekeepers at a certain date at a certain place, many will attend that would not, were only one notice given, especially, if that notice is only a few days previous to the date of the meeting. December is likely as good a month to hold conventions as any. Most beekeepers have by that date finished their fall work and put bees in winter quarters. In other words, all have much more spare time at this date than earlier in the season. Remember what I have said about the main thing is to advertise the meet sufficiently to get out a good attendance. A President, Vice-President and Sec.-Treas. is elected. Quite often the offices of Sec.-Treas. are combined, one holding the two offices. The dues usually collected are \$1.50, the dollar being for a year's subscription to our REVIEW and the 50c retained for local use, as there is no National fee aside from the amount that is decided upon to pay the branch expenses. There MUST be 15 members before a National branch can be formed. Ed.)

Secretaries should ask for a stock of Official Receipt Cards for membership dues. They are free for the asking. Address. The Bee-Keepers' Review, Northstar, Mich.

Attention Michigan Beekeepers

The Michigan Branch of the National Beekeepers' Association will hold their annual convention at East Lansing, Mich. Dec. 9th and 10th, 1914. President Morse writes that a good program will be provided which means that we shall have one of those old time meetings that Michigan is famous for. Remember the date, Dec. 9th and

10th. You will have your work all done and the bees in winter quarters by that time so you can attend as well as not. As Northern Michigan has a good crop of honey and the southern tier of counties a fair crop, this should be a banner convention. Be sure to invite your neighbor beekeeper to come with you. The program will be given later.



Summer Meeting of the New Jersey Beekeepers' Association at R. B. Spicer's Apiary near Wharton on July 8th

N. J. Beekeepers Meet

Good weather, a good crowd and a good luncheon all combined to make the Summer meeting of the N. J. Beekeepers' Association at R. B. Spicer's apiary near Wharton on July 8th a most successful one.

President Roct spoke on "The Best Hive Cover." Mr. Spicer demonstrated his method of rearing good queens and a paper by Harold Horner giving his experience with European foulbrood was read.

This is the largest Summer meeting ever held by the Association, sixty-four persons appearing in the photograph taken in the apiary just previous to lunch, and a few arrived after lunch.

Several new members were enrolled.

E. G. CARR,
Sec'y-Treas.

New Egypt, N. J. July 17, 1914

Attention Iowa Beekeepers

The annual convention of the Iowa National Branch will be held at Ames, November 17, 18 and 19. This is earlier than usual, but it seemed necessary to select an earlier date in order to avoid conflict with other gatherings. The afternoon sessions will be given over to a short course in bee culture, in charge of the college officials. There will also be held a hive products show, and every beekeeper is urged to contribute something to its success. Bring samples of your best product and enter the competition.

S. W. Snyder, Sec.,
Center Point, Iowa.

You are invited to become a National member.

The Perfect Bee Cellar

Given at the National Convention Meeting at St. Louis, Thursday Morning, Feb. 19th, 1914

By E. S. MILLER, Valparaiso, Ind.

What I have to say will probably be of little interest to beemen in the South, but in the North, wintering is an important problem.

There is no such thing as a perfect bee cellar, not yet, any more than there are perfect beekeepers. Some of us, however, who have been studying the wintering problem, have, we think, arrived a step nearer its solution. In the absence of a better definition, I would say that a perfect bee cellar is one that will not only winter all colonies, but also will bring them through practically as strong as when placed in winter quarters.

It has been estimated (Rept. Mass., State Ins. of Apiaries, 1912) that in the winter 1911-12, about forty per cent of the colonies in the Northern states perished. It is probable that the average annual loss exceeds twenty per cent. My average annual winter loss in the last five years has been less than one per cent. I attribute this result to the fact that I have attempted to apply scientific principles in making the conditions right, acting upon the theory, that if all the conditions are right, there will be no losses.

Now what are some of the most important of these conditions? First, there should be a nearly constant temperature of about 45 degrees. Secondly, there should be a constant and abundant supply of pure air passing through the cellar. Third, the humidity should be normal, that is, the air should be neither too moist nor too dry. Other important conditions are strong colonies and sufficient stores.

To insure proper temperature conditions, the cellar should not extend above the surface of the ground. The ordinary house cellar built partly above ground is not suitable for this purpose, for the reason that the variation of temperature will be too great. Provision also should be made to prevent the

escape of heat at the top by making it frost proof and as nearly air tight as possible; and, furthermore, the temperature of the incoming air should be modified before entering the cellar. This may be accomplished either by passing it through a room or air chamber, according to the plan of Mr. Alexander, or by conducting it for a considerable distance underground through an eight or ten inch tile, the latter being the less expensive construction. A series of temperature readings at the outside and also at the inner end of such a conduit, show that the air is effectually warmed in cold weather and cooled in warm weather by its underground passage.

The best temperature for a bee cellar is a question not yet definitely settled. I have wintered one hundred colonies without loss when the thermometer inside indicated from 36 degrees to 40 degrees for months, but I find that they come through in a much better condition when kept above 45 degrees.

The next and perhaps the most important thing to consider is proper ventilation. Without artificial heating there seems to be but two practical modes of bringing this about. Both should be used. One is by utilizing the pressure due to difference in temperature within and without the cellar and the other consists in taking advantage of wind pressure. The wind pressure is horizontal, therefore I would extend to the windward or westward, an eight inch tile to a distance of about seventy-five or one hundred feet. This tile is placed under ground below frost line and enters the cellar near the bottom. Whenever the wind blows from southwest, west, or northwest, there is a strong current of air through the tile, and even when there is no apparent movement of air outside, a considerable current

can be detected at the intake.

The exit for impure air is provided for by a twenty-five foot chimney built on the leeward or east side, from the cellar floor up through the building above. The opening into the chimney is at the bottom of the cellar and the current at this point is usually strong enough to extinguish the flame of a lighted match or candle whether there is any wind out side or not. The air rises in the chimney because the cellar air is warmer and therefore lighter than the cold air. The air in a cellar thus ventilated should be apparently as pure as that out of doors, with practically no odor, no visible moisture, and very few dead bees on the floor.

With proper ventilation, temperature conditions may vary widely without disastrous results. With proper temperature, bees can get along with less air, but for perfect wintering they should have both.

If air containing moisture is cooled the moisture will tend to become condensed and dampness will follow. If air is warmed, its capacity for moisture is increased. Thus cool air in passing through a cellar of higher temperature will tend to dry it out, and yet there is no more danger of becoming too dry than if the hives were out doors. It follows that, with proper ventilation, the question of humidity will take care of itself. It is true that while in a state of hibernation, bees do not consume as much oxygen as when active, yet, under normal conditions, they maintain a temperature within the cluster considerably higher than that outside and the production of heat necessitates the consumption of food and oxygen. A movement of air is necessary both to furnish oxygen and to remove impurities, chiefly water, carbon-dioxide and the products of fermentation. Colonies kept in a damp and vitiated atmosphere will have less vitality than those supplied with pure air and are very apt to dwindle away in the spring.

The question sometimes asked is, "Why not let the air in at the top?"

Many people, it seems, have difficulty in understanding that

air has weight, that cold air is heavier than warm air, that warm air tends to rise, being displaced by cold air, that if an opening is made in the top of a cellar the cold air will pour into it, and will remain there and will become damp, and stagnant and impure, and bees will die by thousands and colonies will die. Mold will form on the combs and dead bees will clog the entrance and the colony strength will become reduced so that when set out in the spring more colonies will die—all because the cellar was permitted to become a receptacle for cold, damp, vitiated air. Bees are sometimes wintered in spite of such adverse conditions, but never because of them.

In placing bees in the cellar it is not necessary to remove bottom boards, but they should have full width, $\frac{7}{8}$ inch entrances. The hives should tip slightly forward, so that gravity will assist in keeping the entrance clear. The cellar should, of course, be kept dark and preferably quiet. It is important that colonies should be strong and have sufficient stores when placed in the cellar. Do not turn the hive entrances to the wall, give them all the air you can.

As to the general construction of the cellar, I would say that for one hundred colonies it should be about 16x20 feet by 7½ feet deep. Solid concrete is the best material for side walls. A cement floor should slope to a drain at the center and the cellar should be surmounted by a substantial building.

Depreciation, losses of colonies, extra labor and inconvenience, cost of outer cases, and the large consumption of stores make out-door wintering in the north an expensive undertaking.

If one is in the business to stay, it will pay to own land and to put up buildings that are properly constructed.

There are a considerable number of members who think that the old plan of voting direct for the officers of the Association instead of through the delegate plan is the better. Make your wants known so they can be published in the November Review, otherwise they cannot be acted upon at the next February meeting by the delegates.

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzl, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.
G. M. Withrow, Mechanicsburg, Ill.

HORSEMINT

Wilmon Newel, College Station, Tex.
Alfred L. Harlt, Elmendorf, Texas.
A. L. Krueger, New Ulm, Texas.
H. E. Graham, Gause, Texas.
H. D. Murry, Mathis, Texas.

RASPBERRY

J. N. Harris, Mancelona, Mich.
C. J. Freeman, Bagnall, Mich.
F. D. Stephens, Box 383, West Branch, Mich.
E. A. Stoddard, R. No. 2, Mancelona, Mich.

ALFALFA

J. H. Stoneman, Blackfoot, Idaho.
A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander, Wyo.
Webber Bros., Rt. 2, Blackfoot, Idaho.
J. Edgar Ross, Brawley, Cal.
Robert E. Foster, Rifle, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.
C. Stimson, No. 1, Holly, Colo.

AMBER

C. F. Smith, Cheboygan, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Quirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.
J. M. Cutts, R. 1, Montgomery, Ala.
A. L. Krueger, New Ulm, Texas.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

BASSWOOD

N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittinger, Rt. 11, Franksville, Wis.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.

C. D. Townsend, Stockbridge, Mich.
E. D. Townsend & Sons, Northstar, Mich.

Frank Kittinger, Caledonia, Wis.
W. H. Townsend, Hubbardston, Mich.
John Homack & Son, R. No. 3, McGregor, Iowa.

E. Woodall, Goodman, Wis.
A. F. Roska, R. No. 2, Swartz Creek, Mich.

E. H. Canfield, Carson City, Mich.
F. W. Lesser, E. Syracuse, N. Y.

WHITE CLOVER

E. F. Smith, Chadwick, Ill.
R. C. Zeader,
C. H. Burrows, Oran, N. Y.
E. B. Rosa, Monroe, Wis.
F. M. Dittmer, Augusta, Wis.
B. F. Schmidt, North Buena Vista, Ia.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co., Wis., No. 19.
Byron S. Hastings, Rt. 5, Brookville, Ind.

S. C. Boyle, Bode, Iowa.
E. A. Doney, Dixon, Iowa.
Orville Safford, Fort Edwards, N. Y.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snvder Bros., Center Point, Iowa.
Dr. C. G. Luft & Son, Fremont, O.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, LeMars, Iowa.
A. S. Crotzer, Lena, Ill.
W. H. Pearson, Mitchellville, Iowa.
M. H. Lind, Baders, Ill.
Frank Kittinger, Caledonia, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prish, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
Niels A. Nelson, Dike, Iowa.
Geo. E. Capwell, Cottonwood Falls, Kan.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Dell E. Berryman, 2308 20th ave., Central City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
Wm. E. Dailey, R. 3, Woodsock, Ill.

ORANGE

James McKee, 559 Grand Ave., Riverside, Calif.

BUCKWHEAT

Jas. McNeil, Hudson, N. Y.
E. A. Duax, Chippewa Falls, Wis.
Wilmer Clarke, Eastville, N. Y.

HWAJILLA

Frank Talbot, Pearsall, Texas.

SAGE

George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.
R. M. Spencer.
G. Frank Pease, Shreveport, La.

The Review Debt Subscription List

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we must have many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$112 25
Henry C. Godberry, Miami, Mo.....	1 00
Aaron Cox, Oxford, Iowa.....	2 00
W. C. Fleming, Greenboro, N. C.....	1 00
Deroy Simpson, Flushing, Mich.....	1 00
Francis Dushore, Valpariso, Ind.....	1 00
J. M. Mundell, Hobart, Ind.....	1 00
Leon C. Wheeler, Barryton, Mich.....	1 00
J. Gobeli, Glenwood City, Wis.....	1 00
John Lefler, Mentone, Cal.....	1 00
John J. Peters, Arlington, Wash.....	1 00

Subscriptions to the Review debt are not coming as fast as we anticipated; still, we have at this writing \$123.25, the last month's contribution being the largest yet, which is very encouraging. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the August REVIEW. We feel proud of the above list. It is the largest one yet and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we should like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

Notice to Secretaries

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we are very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	116
P. R. King, Ohio.....	34

Gus Dittmer, Wisconsin.....	23
E. G. Carr, New Jersey.....	16
P. E. Crane, Vermont.....	15
E. J. Winder, Utah.....	15
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The Review is pained to learn of the death of the wife of R. A. Shults, the queen breeder of Gosby, Tenn., which occurred on June 25th. Mr. Shults writes on this account the queen business has been somewhat delayed, but that he is now nearly up with orders. Will the patrons of Mr. Shults kindly take notice and not be too hard upon him under the circumstances, should there be delay in receiving their queens.

Make it a point to attend your local convention when it comes along. You will not regret it! Those who get started most always follow it up—showing that they are well pleased with money and time expended. Try it this Fall, or winter, whenever your convention date is.

Keep Pigeons

They Pay Dollars While
Chickens pay Cents

The young 20 to 25 days old sell for 40 to 60 cents each (according to the season.) The City markets are always clamoring for them.

Each Pair of Pigeons will
raise 18 to 22 young a year

They will clear you above all expenses, \$5.00 a year per pair. They breed the entire year. Twenty minutes daily will care for 100 pairs.

Always penned up out of the way
Very small space required

All this is fully explained in this month's issue of our Journal. Send for it; price 10 cts.

Reliable Squab Journal
Versailles, Mo.

It costs the Review nearly a hundred dollars a year to finance the National. This should not be so. A fee sufficient to cover all regular expenses should be levied upon each member.

It helps a magazine wonderfully to say I saw your advertisement in the REVIEW in answering advertisements.

Try the REVIEW classified department for results.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the bee-keeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind. tf

WRITE US for prices on car lots of Fine Alfalfa Extracted honey to be delivered after July. Address MARTIN BROTHERS, Lander, Wyoming.

FOR SALE—Orange honey, 1914 crop. Packed in 60-lb. cans, 2 in a case, net weight. Price 9c per lb. Sample free. JAMES McKEE, 559 Grand ave., Riverside, Calif.

HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We are paying 34c per pound for nice bright yellow, clean beeswax. CHAS. ISRAEL BROTHERS CO., 486-490 Canal St., New York, Established in 1875.

WANTED—Extracted honey. Send sample and best price, also quantity you have for sale and how put up. HENRY J. ZINN, 1135 Wyo. Ave., Forty Fort, Pa.

FOR SALE—Fine extracted honey, mixed clover and basswood. Tiered up and extracted after the honey season. Put up in new 5 gal. sq. cans, two in a box, 120 lbs net. Price on request. DR. C. G. LUFT & SON, Fremont, Ohio.

FOR SALE—3000 lbs. extra fine clover and basswood blend of extracted honey, ripened on the hives and stored in new 60 lb. net tin cans. This honey is at my home in Bay City, Mich. Write for free sample and price stating amount you can use. Address O. H. Schmidt, 914 Court St., Reading Pa.

WANTED—To buy 3000 lbs to a car load of Comb and Extracted honey. Iowa, Wisconsin or Michigan preferred. Quote prices. W. H. HYDE, New Canton, Ill.

FOR SALE—Horsemint extracted honey. Also dark honey from Huckleberry. Put up in new 60 pound tin cans. Write for prices. A. L. KRUEGER, New Ulm, Texas.

FOR SALE—A carload of fine Clover and basswood blend of extracted honey, in New York state. Parties interested kindly address CARLOAD, Care THE BEE-KEEPERS' REVIEW, Northstar, Mich.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We will pay the highest cash price for nice, bright yellow, clean beeswax. CHAS. ISRAEL BROTHERS' CO., 486-490 Canal St., New York. Established in 1875.

RASPBERRY HONEY—Left on the hives until it was all sealed, and thoroughly ripened, it is thick, rich and delicious. Put up for sale in new 60 lb. tin cans. Price \$6.00 per can. Sample by mail for 10c, which may be deducted from an order for honey. ELMER HUTCHINSON, Lake City, Mich., R. F. D. No. 2.

FOR SALE—A car load or less of nice colored honey, both chunk and extracted. A quantity in 3 lb., 5 lb., 6 lb., and 10 lb. F. T., Pails, also in 3 lb and 6 lb Mason jars. Can also furnish it in bulk packages if required. Kindly say how much you can use, the package you prefer and we will be pleased to mail you a liberal sample and quote you our best price. GRAHAM & GRAHAM, Gause, Texas.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys this superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

BEEES AND QUEENS

FOR SALE—15 colonies bees. Also 15 new 8 frame hives and a quantity of foundation. Clyde Cobb, Belleville, Ark.

THREE-BANDED ITALIAN queens, bred for business; untested, 75 cts. each; 6 for \$4.25. Satisfaction guaranteed. CHARLES ZWEILY, Lemont, Ill.

PEDEGREED GOLDENS, untested 75c tested \$1.25. Breeders \$10. No discount for quantity. Border City Apiaries. 223 N. B. St., Ft. Smith, Ark.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

REDUCED PRICES for Sept. and October. Untested queens of my 3-banded Italian stock. One for 70 cts., 6 for \$3.90, 12 or more at 60 cts apiece. No disease and no better queens at any price. Full colonies and several apiaries cheap. H. D. MURRY, Mathis, Texas.

SPECIAL RATES for September. Untested queens of my 3 banded Italian stock at the following prices: 1 for 70c, 6 for \$3.90, 12 or more at 60c apiece. No disease and no better queens at any price. Full colonies and a number of apiaries for sale. H. D. MURRY, Mathis, Texas.

DON'T WORRY—Get your queens from Murry. Best 3-banded stock obtainable. Reared by latest scientific methods. No better honey-gatherers anywhere at any price. No foul brood or other disease. Tested, 1 for \$1.00; 6 for \$5.00. Untested, 1 for 70 cts., 6 for \$4.00. Bees by the pound. Write for prices. H. D. MURRY, Mathis, Texas.

QUEENS by return mail or your money back. Guaranteed purely mated. J. E. Hand strain of 3 Banded Italians bred for gentle Honey gathering and wintering. State inspector's certificate. Select untested 1, 75c.; 6, \$4.; 12 \$7. Tested 1, \$1.; 6, \$5.; 12, \$9. Select tested 1, \$1.25; 6, \$7.; 12, \$13. Write for price on large orders. J. M. GINGERICH, Arthur, Ill.

You are invited to become a National member.

FOR SALE—Three Banded Italian Queens, bred from the best honey gathering strains that are also hardy and gentle. Untested queens 75c; six \$4.25; 12, \$8.00; tested \$1.25; six \$7.00; 12, \$12.00. For select queens add 25c each to above prices. Breeding queens \$3.00 to \$5.00 each. For queens in larger quantities write for prices. ROBT. B. SPICER, Wharton, N. J.

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen..... .75
1 doz.....\$7.20
4 doz. or more.....50 cents each
J. H. HAUGHEY, Berrien Springs, Mich.

Try our Classified Department and get results.

ALBANY, N. Y.—We are having quite strong demand for honey now with light receipts yet as it is early. We strongly advise beekeepers to get their crop ready as soon as possible, not waiting for full crop before marketing as the early season sales when receipts are light are always better than a month or two later when all are rushing to market. Extra white comb sells at 17-18. Good 16, medium 15c. Dark and B. W. 14. Extracted very dull.

Respectfully,
Aug. 7 H. R. WRIGHT.

CHICAGO—Comb Honey of the crop of 1914 is selling on this market at 15c per pound for the best grades of white; one fancy lot of Alsike and White Clover sold at 16c. The ambers bring from 10c to 14c. Extracted White sells at 7c to 9c. Extracted Amber sells as 6c to 8c. Prices being governed by kind, quality, flavor and package. Beeswax sells at 35c if free from impurities.

Aug. 18th. R. A. BURNETT & CO.

The Temperature of Honey-Bee Cluster in Winter

By E. F. PHILLIPS, Ph. D.

Continued from page 323

which were less than $4\frac{1}{2}$ inches apart on the same level in the same space between combs, and a difference of 75° F. between this couple

and the bottom board $4\frac{1}{4}$ inches below it. What this difference might sometimes be in colder climates may be imagined. Examples of this kind might be multiplied indefinitely from the records of these experiments.

The source of the heat of the cluster must, of course, be the oxidation of the food consumed by the bees. The bee is classed as a cold-blood animal in that the temperature of the individual bee is practically that of the surrounding medium. There is obviously, from the records just given, no internal regulation of the temperature of the body such as is found in birds and mammals, for the temperature of a broodless cluster varies greatly. From the observations made of the various colonies, especially Colony C, it is clear that heat for the warming of the cluster is produced by muscular activity. While, of course, some heat is doubtless liberated by other life processes, this is practically negligible when bees are quiet, as in Colony A when above 57° F. That higher temperatures may be produced, greatly increased muscular activity is required, and in Colony C in cold weather bees in the center of the shell of insulating bees were seen fanning vigorously and executing other movements, such as shaking and rapid respiration. We thus have the paradoxical condition that bees fan to heat the cluster in winter as well as to cool the hive in summer. Observation of this kind were repeated beyond number, and this theory of the method of heat production is entirely supported by the repeated observation of a humming noise from the cluster during cold weather.

A few details of the observations on Colony C may be of interest. For example one bee was observed fanning vigorously for $7\frac{1}{2}$ minutes (9.53 to 10.00 $\frac{1}{2}$ a. m., January 23) while the other bees kept a space cleared for it. The temperature of the nearest thermometer rose $\frac{1}{2}$ ° F. during this time. At 9:52 this thermometer was almost a degree cooler than at the time of greatest heat during the fanning. The ra-

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pidity of fanning of the wings varied, and toward the end of the time it became so slow that the outline of the wings was distinguishable. After the excessive activity this bee stood in the same place for a time. Rapid respiration may play a more important part in heat production than at first appears. One bee was observed to breathe 21 times in 14 seconds and then cease the rapid respiration. On other occasions 50 or more bees would begin shaking their bodies from side to side.

It has been shown in earlier sections that feces in the rectum cause irritation, which induces increased activity and causes greater heat production. It has also been found that other kinds of irritation being about the same result, but a discussion of these points cannot be undertaken here. It is at least evident from the records obtained in this work that colonies of bees in winter, either in cellars or out of doors, should be disturbed as little as possible. This appears to apply especially to cold weather out of doors or in the cellar, especially after the colony has been confined for some time.

The facts mentioned concerning the ability of the bees to conserve the heat generated will perhaps raise the question as to the temperature of the hive outside the cluster in cold weather, when the cluster is compact. In the case of Colony A the temperature of the hive outside the cluster was often practically as low as the outside temperature. This colony was not packed and had a rather large entrance. If the cluster forms such an efficient insulator in itself it might be presumed that packing about the hives is of little value and that it might even be harmful, in that it would not serve to conserve heat and would prevent the heat from the sun from penetrating to the cluster. This line of reasoning, however, does not follow, and in any case it is unsafe to speculate about these things without more facts. The effects of various forms of packing are being

It is your right when buying queens to demand a pedigree. We send one with each order for queens. Border City Apiaries, 223, N. B. St. Ft. Smith, Ark.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

FOR SALE—100 second hand 8 and 9 frame hive bodies at 20c each. Write for description. C. D. TOWNSEND, Stockbridge, Mich.

WANT TO SEND YOU our catalogue and price list of behives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

BEEKEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man W. D. SOPER, Jackson, Mich.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

Gather in the White Sweet Clover Seed

Those who have had experience tell us that it is wonderful how well white sweet clover yields seed. We were wondering if there were not many of our members who live in a locality where sweet clover seed can be harvested at a profit.

The very best seed is cut and thrashed by hand, then run through a fanning mill. This is the method that produces the unhulled variety, which is usually free from weed seed or foreign matter.

WHITE SWEET CLOVER SEED—We are getting in "touch" with several members who will harvest a considerable White Sweet Clover Seed this fall. Last season we could not get half enough of the unhulled white to supply our members. We would suggest that those wanting seed place their order early this fall, as we anticipate another season of heavy demand. You may send in \$15 per hundred pounds for the unhulled white variety, and if the price is more or less this can be adjusted at the time of shipment. Address The Beekeepers' Review, Northstar, Mich.

HONEY LABELS — Lowest price. PEARL CARD CO., Clintonville, Conn.

Chase, Mich., July 21, 1914

Editor Review:—I favor the Goldenrod cover because it is easily distinguished in a pile of other papers and the Review don't look right without it.

Yours truly,
FRANK MURRAY.

When sending in your renewal for the REVIEW, kindly ask your neighbor beekeeper to subscribe with you.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one, \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame \$3.50; six two-frame, \$20.00; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

studied.

In closing it may be desirable again to state that too hasty conclusions must not be drawn from the facts here presented. For example, the records on heat production might be interpreted as indicating the desirability of a cellar temperature higher than beekeepers usually believe to be best. Experiments to test such a theory are now being carried on, and it is found that a broad statement as to the best cellar temperature can not yet be given. Under most conditions colonies cannot be brought to the critical temperature, 57° F. without disturbance. It is hoped that more work will throw some much-needed light on this important subject.

This is an Advertisement

Every Member-Subscriber Should Read This Page Carefully, Do You Want a Review or Not?

In Indianapolis, Ind. sixteen months ago, an association of dealers in beekeepers' supplies was formed. This association incubated in Cincinnati, Ohio at the 1913 National meeting, when it was found that the Delegates at that meeting favored the National continuing the publishing of the Review. The object of that meeting was to kill the Review. They saw danger in the beekeepers owning a journal in which they could discuss their own affairs. Especially, did they see the way clear for the members to buy their supplies without their assistance (and profit.)

The first move they made was to withdraw their support from the advertising columns of the Review, knowing that a publication of the Review sort was not much of a money maker, they thought to put us out of business financially.

Their united withdrawal of advertising of about two pages cut out revenue about \$28 per month. Then we have very good reason for believing that their influence caused another page of advertisers to leave the Review. As each Sub-

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scriber-member owns an equal share in the Review, and is equally interested in its success or failure, it was thought best to inform you of the opposition we as publishers of the Review are up against. We, as honey producers are the very men who have built up those great supply houses by our patronage, they in turn are now paying us back with WHAT! We will allow our readers to answer the question in their own language, what!

We are advertising for support. We have a very good moral support, but just now we need Financial support, inasmuch as the Review debt MUST be paid and that very soon. What we need most just now is for our friends to come to the front with the funds to clear the Review from debt this fall. There are many of you who will not miss five or ten dollars, let it come along, and when we are out of debt, the Review can be printed as usual, for there will without a doubt be money enough to do that in the future, as in the past.

A New Danger Confronts Us

We as an association must make a united stand, or we may lose the privilege of buying our Tin containers at lowest manufacturers' prices as at present, for jobbers have now obtained control of the American Can Co's territory of the states of Texas, Idaho and Utah. Members in those three states cannot buy American Can Co's ware without paying agents' profits. Buy ALL your Tin containers through the NATIONAL and by united effort we may be able to get back those three states for our members. The Can Co's. will consign their territory to those, and those only who give them the most patronage. That is the way of business.

Get your neighbor to join the NATIONAL! We need all your support at this time. There is NOTHING to lose and MUCH to gain by being a NATIONAL member.

In answering advertisements in the REVIEW, kindly say, I saw your advertisement in the BEE-KEEPERS' REVIEW.

Bruce Wisconsin, July 20, 1914.

Editor Review:—White honey flow about over, and was fairly good. Basswood cut short by heavy storms. Will average about 75 pounds per colony.

Yours very truly,
ARCHIE BLACKBURN.

See California

and her two great Expositions FOR ONE DOLLAR

California will hold next year two great universal Expositions, one at San Francisco and the other at San Diego, in celebration of the completion of the Panama Canal and the joining of the Atlantic and Pacific Oceans.

To supply the demand for reliable and authentic information on California and these two Expositions, we have published two guide books; one on San Francisco, the Exposition and Northern California; the other on Los Angeles, San Diego, the Exposition and Southern California, also a lithographed view of San Francisco in colors (size 30x45 inches) a picture of the rebuilt city, including the Exposition. Each book is 6x9 inches, contains 150 pages and beautiful illustrations.

These two books and view give a comprehensive, honest history and description of the State, her principal cities, resources and her two great Expositions. Sent postpaid for a one dollar bill, money order, draft or check. North American Press Association, 1455 Hearst Building, San Francisco.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1.00**

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On the latest, most modern, most sanitary cream separator built. Gearing runs in a constant bath of oil and all enclosed, dust and dirt proof. Closest skimming, new type disc bowl. A lot of New Sanitary features not found on other makes. One-half the price of the old style, cumbersome machines selling through agents and dealers. Buy direct from factory and save big money. Get my new Catalog. A postal brings it.

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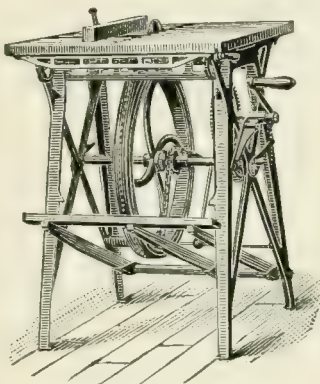
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G. B. Lewis Company, Watertown, Wis.

Bee-Keepers' Supplies and Fruit Packages

We manufacture the famous Sheboygan hive, which always gives absolute satisfaction. Our perfect sections made from selected white basswood, are recognized as the best on the market.

Catalog now ready for distribution. Write for copy.

Sheboygan Fruit Box Company
Sheboygan, Wisconsin



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Bee-Keepers will save money by using our FOOT POWER

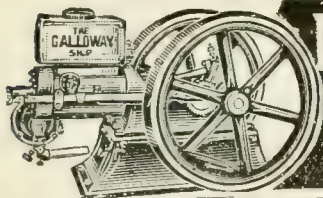
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in making their hives, sections and boxes. Machine on trial
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Let Me Ship You This Great 5HP Galloway Stationary Engine-Only 99⁵⁰

Galloway Engines Are Made in Sizes from 1 3-4 to 15 H. P. Twenty-Four Different Models.

Yes Sir! Try It 30 Days on Your Own Farm at My Risk

It's got to please you entirely or it won't cost you one cent. My guarantee is printed in black and white and says "Satisfaction or your money back" with all the freight charges paid. Galloway engines are high quality engines selling at the lowest price ever made. Five years ago when I came out with my engines, dealers were asking \$250 to \$300 for inferior 5 h. p. engines. I've made them come down in price, but today they can't anywhere near meet my new prices. Get my catalog and see the proof.

My Direct from Factory Plan Saves You \$50 to \$300

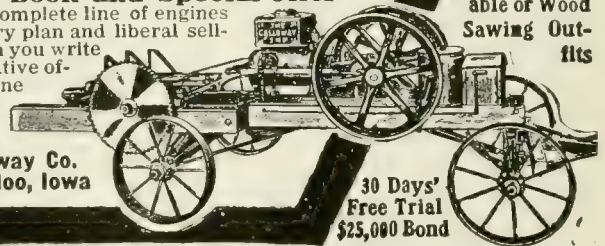
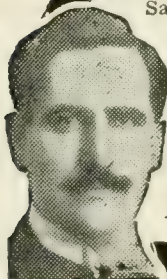
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GET TOP NOTCH PRICES FOR YOUR MONEY BY USING LEWIS SECTIONS AND SHIPPING CASES

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Management of 3000 Colonies in Fifty Different Yards

J. J. WILDER, Cordele, Ga.

Continued from page 322

Clincapin, the honey of which was very inferior. During this flow the bees had built up and several barrels of this honey had been removed.

Upon examination I found that I was short a great amount of beeswax that I was expecting and also short a good number of colonies from the original number. I discovered that my apiarist had dug pits in the beeyards and buried the comb and honey as he removed it during transferring in order to avoid robbing. As the transferring was done by the immediate method and only a few days previous to the spring honey flow, starvation struck the yards for the bees had lost all their stores. They had swarmed out and got together in great clusters, which give no end of trouble and losses. Then too, whole apiaries were transferred at a time and not just a few colonies at a time. Then too I found that nearly every brood nest was badly honey clogged and the queens were not active. My apiarist told me that he had removed a lot of honey from the brood nests but that it never did any good, for the bees would refill the comb with honey and in many cases the queens would not occupy it. He did not see any use to proceed further with this part of the work. This of course was true but he should not have stopped but kept on and results would have been better.

I took my helper and we extracted the honey from the brood nest and inserted the empty comb in the middle of the hive. I noticed by the time I got around that the queens in the first yard were beginning to get very active. As the honey plant was still yielding nectar the chances were good for some honey, at least if we could get enough bees into the hives. We finished this task and gave the bees plenty of empty supers which were ready. My helper and I came back to Cordele to assist the man left in charge there to take off the summer crop of honey and prepare same for market, while awaiting results for a few weeks in the new field.

....The....

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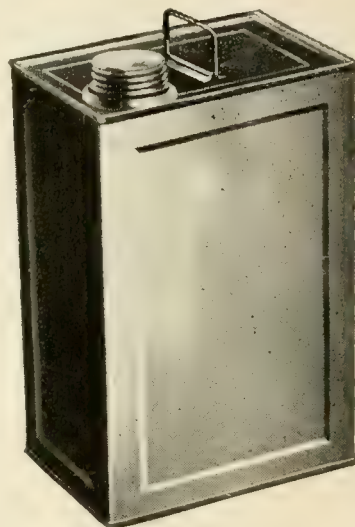
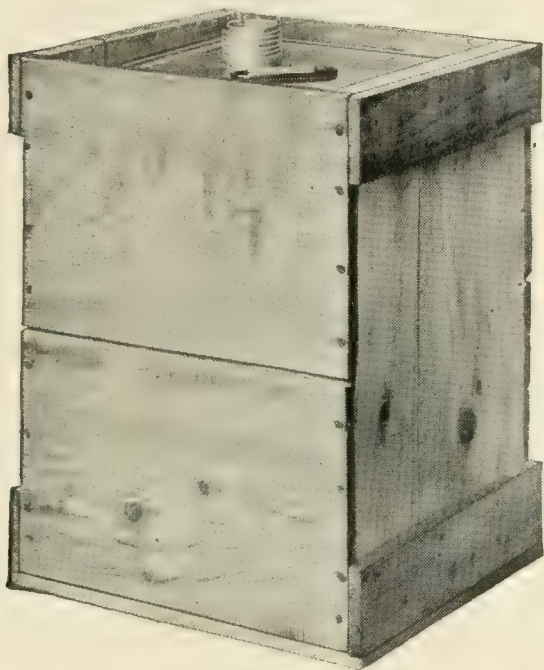
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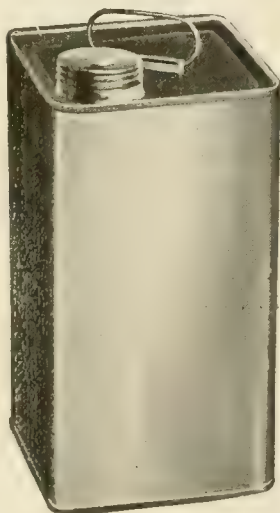
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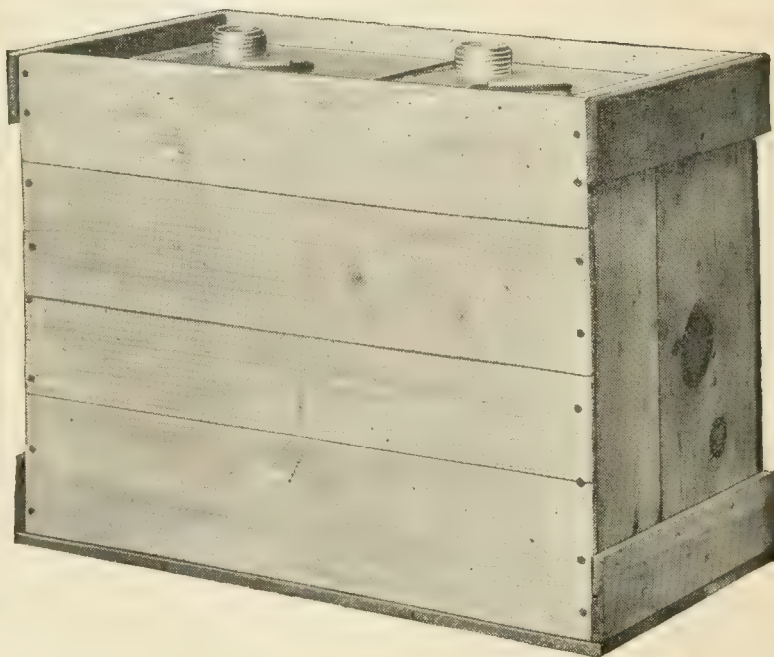


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— FOR 1914 —

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For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies and move them back again in the spring. Details of moving by boat, wagon, auto-truck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1 — WINTERING—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14 which experiments will be published in this number. We shall also give our own experience summed up as to feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you cannot afford to miss such a wealth of information as the subscription price, \$1.00 will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly



OCT.
1914

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Side View of David Running's Bee Cellar and Work Shop. Notice the earth banked up even with the shop floor, which brings the cellar entirely under ground. A very essential requisit in a good bee cellar.

End View above. See next page

The Bee Keepers' Review.



Established in 1888 by the late
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OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

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Why I Winter in the Cellar

By DAVID RUNNING, Fillion, Mich.

Presented at the Michigan State Convention, Detroit, December, 1913.

My reasons are as follows:

First, My place is located in the northermost part of the thumb of Michigan. Lake Huron being only seven miles distant on the east and five miles to the north, while Saginaw Bay extends to the west and southwest. This means that we have piercing cold winds off the water and ice all winter, regardless of where it comes from excepting the south.

Second, We some times have heavy falls of snow coming before the ground is frozen in the fall and remaining all winter. This keeps out door wintered bees in a damp condition, since the snow keeps melting from below regardless of how cold it is above the snow which is often three feet or more deep on the level. During the winter of

1903-1904 I lost 112 out of 144 colonies from this cause. On the 12th of April 1904 as the weather was beginning to moderate somewhat, I thought I would go out and inspect the bees which had been covered with snow since the fall before. This is what I found. There was no frost in the ground whatever, the snow had melted around the hives as much as two feet on all sides. Bees had been rearing brood quite heavily and were apparently nearly all alive although everything was damp. But while the bees were alive they were in a weakened condition and dwindled very rapidly, as many as twelve and fifteen colonies dying every day, and what few pulled through (32 in all) were weakened so that they hardly amounted to anything that

season.

Those bees were in excellent shape the fall before, and could they have been wintered in the cellar that I now have, my profits from honey alone the following season would have been worth at least \$1200.00 as we never had a better stand of clover than we had that year, but owing to outdoor wintering there was no profit for me that year from the bee business with the exception of about \$200.00 made from buying up combs from my neighbor beekeepers who had also lost all or nearly all of their bees from wintering out doors. Since that time I winter all my bees and some of my neighbors' in the cellar, even to chaff hives, having at the present time 333 colonies in 8 frame single wall hives and 48 in Root chaff hives stored away inside, and even though I could winter out doors without any loss in bees I could not be tempted to do so, since the saving otherwise is so great. I find that the consumption of stores is at least ten pounds per colony less in the cellar. This alone means a saving this winter of 3810 pounds of honey which figured at 9c per pound would bring \$342.90. Then there is the saving of winter cases which amounts to quite an item since lumber is getting so high, and I find that winter cases only last a few years at best since they must be exposed to all kinds of weather. Then there is another thing which to me means a lot and that is the SATISFACTION OF KNOWING that in a good bee cellar properly built, every winter is alike, regardless of outside conditions, and if we desire to go away for the winter, which we did the winters of 1905 and 1906 and 1906 and 1907, having put the bees away in the fall, packing the cellar and remaining away until spring, we can do so knowing that we have the wintering problem under our control, and that if we prepare our bees we are just as sure of wintering all of them as we are of wintering our chickens or horses.

Preparing Bees for Winter--also How the Cellar is Constructed

Prepare all bees for winter early. Have all feeding done in September. Carry bees in the cellar just before you think settled cold weather

is coming on, handling as carefully as possible.

Have entrance at least 1 1/4 inches deep and full width of hive. Keep cellar quite well filled with smoke while storing bees away and keep them quiet. It is best to put them in at night, especially if there are many to go in, as the doors and ventilators can be left open all night and by morning bees will be quiet and smoke cleared away. If cellar is DRY and WARM ENOUGH no top ventilation is needed, it is never needed in our cellar.

Take bees out in spring some cold night after snow is gone. If possible try and get them out two or three days before they can fly, NOT NECESSARILY the first warm spell but just so they will remain quiet a day or so, they will locate their hives better, and not drift.

After bees are all set out, close entrance down to two or three inches in width to three-eighths or one-half inch deep, this also prevents drifting. Entrances can be made larger after the bees fly, if needed.

Before starting to take bees out leave doors open one or two nights giving them an abundance of fresh air. Just before carrying out (if done at night) fill cellar with smoke. After getting them out and entrances adjusted, leave entirely alone for at least one month. By that time some young bees are hatching and weather is usually getting quite warm.

No good can come from breaking the sealing around the cover, allowing cold drafts to enter, and disturbing the bees at that time of year.

It is a big advantage to get ceiling of cellar below the frost line, if possible, then the walls will be dry. If frost reaches through the walls, or if walls get cold around top, moisture will condense there and cause dampness. Would also advise that you use two sets of joists with six inch air space between sawdust and upper floor. This will do away with disturbing the bees when working in shop above and will also protect joists from rotting out. I would build cellar walls of concrete and have cement floor with tile laid underneath on all four sides. I would

(Continued on page 395)

Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordele, Ga.

A Crop Removed While Another is Being Gathered

As soon as my helper and I reached my home business from my new field of adventure where failure had been our portion, I put him in the packing house with a cheap assistant. With the helper I proceeded to remove and pack the crop of honey then on the hives.

There was no extracting to be done for this honey was from the cotton plant and once extracted it would soon granulate. The packing consisted of removing the honey from the shallow frames, cutting it cross wise in strips about one and a half inches. A couple of these were placed in each pint jar endwise, then the jar filled with extracted honey from the tank. This honey had been brought over from the spring crop for this purpose, being barrelled up and in readiness. This was to be our winter stock and if it showed any signs of granulation it would all be sent back to us from our customers. We never removed any honey except the very brightest in color, leaving all dark and soiled combs for winter stores.

This task was about accomplished in sixty days and brought us to the latter part of September and I sent the helper back to the new business, leaving us to finish up and prepare the bees for winter. When I was ready to go back to the new field, I heard from the helper that conditions were the reverse from what they were when we left i. e. the brood chambers were full of brood and a good number of supers were filled with honey. Some few colonies had swarmed, while others were badly crowded for room. On receipt of this I left the home business with the helpers and went to the new one, finding conditions just as he had described.

Evidently during our absence there had been a slow honey flow for thirty days or more from the Pat-

ridge pea which was our main source of surplus honey. This season it was nearly a failure and only furnished a small amount of nectar, but now the summer farewell had come in bloom, and conditions were right for a good yield from it. Up until this time this plant was not generally known as a honey plant of any consequence. The honey was almost water clear, of thick body and fine flavor.

I knew from the appearance of the bloom that the flow would soon be over and we could not hope to get empty supers filled. So we started at once to equalizing storing room. The supers that had just been well started and those not likely to be filled in their present position were placed on the strongest colonies needing more room. This was the first work we did at all yards; then we began taking off and packing. As we made the next round we rearranged storing room again and by the time the flow ceased nearly all supers were finished and we had considerable packed. After assisting my helper over two weeks, I returned back home greatly encouraged and more determined to push the business in the new field. It was the most beautiful or fanciest crop of honey I had ever produced and the harvesting of it was a very small item of work. As soon as small shipments of it reached our customers orders came in for the entire output.

I went over the home business with the helper to see that the bees were properly put up for winter and I outlined and instructed him as to his work for winter. He was to visit every yard every twenty days and clean them off to assure safety from forest fires, to carry to every yard at the time he visited them properly prepared supplies for next season such as supers, some extra bottoms and covers to replace those giving way, also certain amount of one story hives, frames to be wired and full sheets foundation to be

used. This was all set down in the general apiary book which we took along with us during our round so that he could not make any mistakes. All supers and frames were to be well cleaned up and carefully examined to see that all was properly nailed up and in good shape for next season's service. This with certain other shop work was enough to keep him busy until spring work came on.

The latter part of November I left for a winter's stay at my new business, during which time I gave it a good start. More territory was explored and four more convenient and suitable apiary sites were selected and bees put on them from the established yards. This made nine yards in all and each contained about the same number of colonies. This was done in order, then that there might be no moving of bees in the spring or busy season when we were expecting to make a great amount of increase at all yards.

In the previous spring when I had so much transferring done I

had all the lumber in the box hives saved and stacked up around at the yards, this we made into bottom boards for the increase. I had some lumber cut and dressed fourteen inches wide for covers. I had plenty of frames, etc. in the supply room and all I lacked was hive bodies. I went to a nearby lumber yard and picked out the most suitable lumber I could find for this purpose and had it laid down at the camp. We were busy even losing considerable sleep in order to catch up with the work, which we did about the middle of February.

Then I took a two weeks' vacation. Doves and quail being plentiful I hunted some and spent some time sight-seeing up and down the famous Suwanee river, noted for its beauty and grandeur, which I cannot take the time just now to describe. After I gave the man in charge of the business full instructions as to what I expected him to do, I bade him adieu and returned to Cordele to take up my business there on March the first.

Reason or Instinct?

By DR. A. F. BONNEY, Buck Grove, Iowa

In the Beekeepers' Review for August, 1913 is an article entitled, "Do Bees Reason?" I venture the suggestion that this is a question which will never be answered, because all that we can ever have is the OPINION of observers, and note how they differ! And here am I with some opinions.

It is very easy to adapt the writings and definitions of older if not wiser writers to our own way of thinking, and while the definition of Reason quoted, "Reason, or intelligence is the faculty which is concerned in the intentional adaption of means to ends," is good, there is no need to quote further, for that is all there is to it, for it is not denied, nor does it prove anything in regard to the bees or other lower animals. It might, were there nothing more to be considered in regard to the little workers, but there is, and that is the strange

thing which we humans call INSTINCT. What is that? The Century dictionary says: "A special innate propensity in any organized being, but more especially in the lower animals, producing effects WHICH APPEAR TO BE THOSE OF REASON AND KNOWLEDGE, BUT WHICH transcend the general intelligence or experience of the creature; the sagacity of brutes."

Here follow a few quotations, the first from Romanes, as follows: "All instincts probably arose in one or other of two ways. (1) By the effect of habit in successive generations, mental activities which were originally intelligent, become, as it were, stereotyped into permanent instincts. (2) The other mode of origin consists in natural selection, or survival of the fittest continuously preserving actions which, though never intelligent, yet happen to have been of benefit."

Murphy, Habits and Intelligence, says: "Every animal that has well developed eyes presents an instance of the adaption of means to purpose by unconscious formative intelligence, which is quite as definite as that shown in any motor instinct, and far more delicate and subtle." I quote this because bees have NOT well developed eyes.

In his work, *Philosophy of the Unconscious* E. von Hartman says, "instinct is purposive action without consciousness of the purpose.

* * * * The end to which a definite kind of instinctive action is subservient, is not conceived once for all by a mind standing outside the individual like a providence, and the necessity to act conformedly thereto externally thrust upon the individual as something foreign to him; but the end of the instinct is in each single case unconsciously willed and imagined by the individual, and the choice of means suitable to each special case unconsciously made."

If the reader be curious to go deeper into this study than the pages of this work will permit let him take up a careful reading of Mr. Darwin's "Origin of Species." If he will do so he will, I think, find that it is very hard to decide where reason leaves off and instinct begins. Even in the human being, reason is a thing of degrees. You and I know many persons who cannot tell cause from effect, in certain phenomena. The primitive people found in different parts of the world have in many cases very few words and even fewer ideas to express by them. They can count up to ten, but they live and have lived for many generations.

Reason is a thing of intelligence, and is formed, as is habit. A newborn babe will seize its mother's breast and suck, but I do not think anyone will credit the child with reasoning powers; and possibly the bee develops some reasoning powers, while not a reasoning animal as man is.

I cannot sympathize with Mr. Odell's poetic flights. If I am a sample of the "gentler folk" that belong to the agricultural craft may the Lord pity the rest for I believe poetry has no place in scientific research. Neither are beekeepers

more intelligent and observing than are other people, so far as I have been able to observe, nor, again do materialistic critics need to declare "it is more important that the beekeeper should reason than the bee," for that is a self evident fact.

Had I room I should certainly say a lot of nice things about Mr. Odell, for he writes a good article, according to his light, but, and I know he will not think me impolite or personal, he does not observe as closely as he might, and consequently draws wrong inference. For instance, his illustration using the foundation on page 312 does not conform to my observations. I have given a newly captured swarm of bees a hive filled with comb and full sheet foundation which the bees at once drew out, and on the bottom of the hive found a handful of wax in scales. Not being used it had fallen there. The production of wax is an involuntary act or phenomenon peculiar to certain conditions.

Neither is his illustration, according to my way of thinking, on the next page an apt one, for everything the bees do points to INSTINCTIVE action.

I have no objection to Mr. Odell trying to influence the jury by assuming "At every point involved in the successful solution of these difficulties, (AND THEY NEVER FAIL,) is evidence et cetera." The solutions are not successful because they are not solved. Man has been studying psychology since Pythagoras began 2,500 years ago, and the problem is so far as I can see, no nearer solution. Volumes have been written, and more will be, but always the question recurs, "Do the lower forms of life reason?"

I saw an example of the difficulty some persons have of observing and reasoning at our little meeting in Sioux City. A gentleman read extracts from a work and talked about the bee. During his conversation he remarked that the bees put only one color of pollen in one cell, I at once remembered that I had observed otherwise, and mentioned it, but was surprised to find that not one of the many other beekeepers present, some of whom had been at the business three times as long as I had were able to

support my views, while I knew I was right. Moreover, if it were a fact it would be evidence that the bees could distinguish colors—AND SHADES OF COLOR—and that IN THE DARK.

At my first opportunity after getting home I took out a frame containing pollen, and it was the first one I saw; in it I found white and yellow lumps in one cell, and white pounded down on yellow. These I cut out and am sending them to the editor of this magazine while it should not be necessary, for if anyone will watch IN SEPTEMBER they will have no trouble finding differently colored pollen in the same cell. I say in September, for then the bees do not gather freely. In the spring it is all dandelion later on it is white clover, then comes the different colored pollen

from fall bloom, and today my bees are bringing in yellow, white and brown.

Put a piece of wood or stone on a jelly fish and it is refused. Put on a bit of meat, and it is enveloped and digested. Is this reason? I could give many more examples, but always think of space, so will conclude by saying that while bees may reason a little it is not at all likely that they do, because they do not need to. They are the most highly specialized form of insect life in the world today, but all progress ceased with them ages ago, and because they can live, increase and flourish with the developed instinct peculiar to them why the need of anything else? Where may I ask Mr. Odell does instinct stop and reason begin? This simple question answered, we are ready to debate, not before.

Wintering of Bees in Clamps

The location I wish to winter in is near the south end of Lake Michigan in loose sand. I have one cellar but it is not large enough to hold all my bees. How does wintering in clamps compare with cellar wintering? How deep and how wide do you dig the pit? Do you make the pit wide enough to have an air space along the sides between the hives and the side of the pit? How many colonies do you put in a pit? How deep do you dig the pit for L hives and how much covering do you use? I have the privilege of building a cellar right at the bee yard but it is not my land.

The land belongs to an estate and may have to be settled up at any time so I would rather not build on it, altho I can build a cellar that will last eight or ten years for about \$50.00. Do bees in clamps have to be removed in the spring any sooner than bees in the cellar? I usually take them out of the cellar about April 1st. I expect to spend the winter in the southwest and will not be home until the last of March. The clover crop was just 1-5 as much as last year. I have moved all my

bees to the Calumet marsh, twelve miles from the home yard for the fall flow. I put second supers on 25 colonies at one yard of 63 colonies and expect to do the same at another yard today. I have 225 colonies at present.

Any information you can give will be highly appreciated.

Yours truly,

JOHN C. BULL,
Valparaiso, Ind.

* * * *

(Answer—Bees winter in loose sandy soil in clamps about as well as in a cellar. We have had some of the most perfect wintering in clamps, and on the other hand we have lost most all in a clamp. The difference was principally in the stores the bees were wintered on, not the repository, for we have had the same results both in cellar and out-of-door wintering of bees. Your Lake Michigan loose sand ought to be an ideal place to winter bees either in cellar or clamp.

Dig your pit up and down the hill wide enough for two hives to set in side by side and have room enough to handle them with ease. Place three 2x4rs parallel with the pit, to set the hives upon, one at

each side and one in the middle. Set the hives in with bottoms on. The flat cover is loosened and shoved endwise until the cleat rests upon the end of the hives. This leaves a V shape opening the whole length of each side of the hive for upward ventilation. Thus prepared, the top of the covers can be 4 inches below the surface of the ground the pit is dug in. Eighteen inches of loose long straw is now placed over the bees, and the dirt thrown back on. It usually takes a little more earth to cover them below the frost line than is thrown

out of the pit. To get this extra covering, a surface drain is dug along both sides of the pit for better drainage. We dig the pit long enough to hold twenty to thirty swarms. We never use a ventilator, although some of our neighbors do. We called our first clamp, "the grave," but we can assure you it was a very live grave when it was opened the next spring. The bees are clamped in November, usually the latter part, just at the opening of winter, and are removed as soon in spring as the frost is out of the ground. Ed.)

EDITORIAL CORNER

The Orange Honey of Florida

Our recent article in the editorials of "The Bee-Keepers' Review" on Orange honey in Florida, has brought us a very interesting letter from Mr. John Lefler, of Mentone, Calif. Mr. Lefler is a progressive apiarist of the Redlands district and can speak from first hand information. We must confess that we are favorably impressed with his careful and conservative remarks on the crop and crop conditions in his vicinity, and hope he will send in further reports to the columns of the "Review." His letter in part, is herewith quoted.

"That was a very interesting article in the last 'Review' by E. G. B. on 'The Honey Flow from Orange in Florida.' My five apiaries are all adjacent to orange groves. The three in the Redlands district are somewhat more favorably located than the other two at Lama Linda and Del Rosa, and have a larger acreage on which to work.

With us, the orange, in normal seasons, begins about the first of April. There is oftener some bloom in March, upon neglected groves, or groves on sandy soil. Also nearer the coast and in central California the bloom is somewhat earlier than here. However, by end of first week in April, on an average, the bees begin to whiten the combs from the orange blossoms.

As a nectar producer the orange is equal to the basswood of the

east. I have observed a gain of 16½ lbs. in a day from a hive on scales, and have heard of gains as high as 24 lbs. per day. After a wet winter the nectar is rather thin. But often as happened this last spring for example, we have a series of hot north winds, which ripen the nectar in the blossoms making the honey thick and heavy.

"This year my cases of orange honey averaged about three lbs. heavier, per case, than the same cases of sage honey.

In an average season the bloom is all over by May 15th, but this year it closed the first of May. One season, 1909, it held on until the first of June. There was some second bloom this season in a good many groves, during the month of June, but not enough to make much show in supers. This late, second bloom was caused by the "freeze" of 1912 and 1913. The crop in 1912 was rather short and in 1913, a failure, due to the weather in March. The trees bloomed much earlier than usual [Do you mean in 1913? E. G. B.] and many beekeepers got little honey from it, because their bees were not in condition to store surplus from that source. The bloom being practically all gone by May 1st.

We, also, have some difficulty in getting our orange honey pure. Unless the hives are extracted just before the orange bloom, the orange honey will be discolored by old (darker) honey. There is also a

plant here called the Mountain Alfalfa. [Can you give us the real name of the plant? E. G. B.], having a yellow blossom, which comes into flower about the 1st of May. Some seasons the bees gather from this plant an amber honey, which when mixed with the lighter orange honey, throws the whole off grade. I am sending a sample of an extracting from my Mentone yard, being practically pure orange honey. How does it compare with E. G. B.'s Florida honey?"

JOHN LEFLER,
Mentone, Calif.

[We have not ourselves received the sample of your orange blossom honey, Friend Lefler, and so can not compare it with our Florida product. We have, however, samples of several grades of California orange blossom honey. The best grades are very fine indeed, and excellent flavor. Some previous samples received had less than usual of that exquisite aroma, so characteristic of pure orange we feel sure that had an admixture of sage honey. The sage honey being also very light in color, would not discolor the orange, but would alter the flavor somewhat so that an expert could easily distinguish the difference. We are interested in your reference to sandy soil producing an earlier bloom. Our Florida soils are largely sandy in the orange sections, which fact, no doubt, quickens our period of bloom. It is interesting to note that the Florida bloom is fully a month, almost five weeks, earlier than the average California bloom. We had not been aware of that difference before. You have a good record, Friend Lefler, in 16½ lbs. on one colony per day. Was that your BEST hive? You will note our figures for daily gains were all taken from one colony and a very ordinary colony at that, in fact it was considerably below the average even. We secured about 65 lbs. of surplus (orange) from the colony on the scales, while our best colony gave us 195 lbs., so the amount was just three times as great, if the daily yields on the best hive kept pace with the colony on scales, the BEST daily record would be about 30 lbs. However, we should probably not find that it was so much, for the time of

gathering. The ability to work earlier or later, etc. in the more powerful colony would no doubt have made a daily HEAVIER yield than the one on scales, but not necessarily any one day of 30 lbs. But judging from the number of bees pouring in and out at the entrance from the big hive, we feel sure a daily gain of 20 lbs. would have been recorded there during the few days of best flow. Another year we plan to alter the arrangement and place TWO hives on scales, one our best, and one our less-than-average colony. We feel we shall have a better index of honey flow by this means.

You also give very interesting data, Friend Lefler, when you state the orange honey cases weighed three lbs. per case more than the sage. We have usually found our Florida orange honey somewhat lighter body than our Saw Palmetto, about equal to our mangrove, which is also lighter body than the Saw Palmetto. But we have also noticed that the body varies greatly different years. With us it is not apparently WET WINTER, as our correspondent states is true with California that produces thinner honey, but the amount of moisture in the air DURING THE HONEY FLOW. It is possible Mr. Lefler means to assert the same thing that we do. We shall be glad to have him explain this a little more fully.] E. G. B.

The 1915 Convention

Plan on attending the great National 1915 meeting next February. Date and place to be decided upon later.

Get out this fall and winter and mingle with your fellow beekeeper. There is no better place to meet them than at your state of local association meetings.

The narrow minded, self conceited beekeeper is the one who never gets out and mingles with his brother beekeeper. The convention either local, state or national is the best place to get pointers that will help you to a better understanding of your business. There is no one too old to learn.

One cannot know too much about their business, is an axiom to adhere to. The convention is the best

place possible to learn better ways of beekeeping. Shake off those old foggy notions you are adhering to and come out and learn up-to-date methods as is talked at the conventions by our best beekeepers. You will not regret it, although you may think you know it all.

We are very sorry to report both cabbage palmetto and black mangrove honey a total failure this year. The causes are past finding out, the convincing fact remains. It is such seasons as this, that keep the "good season beekeepers" out of the field. The TRUE beeman alters not his opinions nor abates his ardor, in the face of poor seasons. "It is not love, that alters where it alteration finds." Nor is he a real LOVER of the Busy Bee, whose affection for the pursuit WEATHER VANES with the fluctuating seasons' yields.—E. G. B.

Still another affiliated association is added to the already very creditable list. This time it is the Louisiana State Association, with G. Frank Pease, President and L. T. Rogers, Shreveport, Secretary. The NATIONAL is now composed of thirty-three very live affiliated associations and several more being talked of. Get busy and organize the branch you have been thinking about, it's very simple, just call a meeting of bee-keepers, elect your officers and there you are. You need 15 members then vote to affiliate with the NATIONAL, the convention season is just ahead, some leader must make the first move, the rest is easy, only you should advertise the meeting well to get bee-keepers out.

The following letter is interesting:

"Dear Sir:—Your favor of the 27th at hand and regret to say I cannot reply fully at this time regarding all conditions here but will do so later. However I wish to say, I desire to go into beekeeping in a small way. I think the opportunities are good at this place, because the ANTS have killed out nearly all the wild bees and hence there is plenty of forage for a large apiary if properly protected. I contemplate protecting my apiary by digging a ditch around it, mak-

ing a small island of one-fourth acre or more. Here I could kill out the ants."

JOHN G. LEWIS,
B. E. Pine Key,
Marathan, Fla.

[You do not state, Friend Lewis, whether you contemplate surrounding the bees with water, forming a sort of MOAT, or not. If you merely dug a DITCH, no water in it, the large brown ants, so common in Florida, would not be hindered at all from your bees. If you can in some way flood the ditch, you will have a fine method of keeping your apiary free from the troublesome ants. How do you KNOW it was the ants, however, that killed off the wild bees, i. e. the bees in bee trees?] E G. B.

Apropos of the letter from Mr. Lefler we wish to offer a suggestion merely. It refers to the term "Orange honey." On one occasion when speaking to a dealer in one of our large cities, he said, "Do you make honey from oranges? ! ! ! You say such ignorance is worthy of deepest Africa! Yes, but is current widely in civilized America. He was familiar with "orangeade" made (supposedly) from the juice of oranges. He knew, doubtless, of the popular belief, once general, that honey was "MADE" by MAN, instead of produced by the bees, so what was strange in his jumping at the conclusion "made from oranges" when he first heard the term "orange honey."

To that dealer "Orange honey" was on a par with "orange marmalade." It was the persistent practice of one large dealer in choice Delicatessen goods which convinced us that there was a better term; and we have ever since emphasized it in speaking of this honey. It is "Orange BLOSSOM Honey." Not only is it more exact, it has also the added charm of being more PICTURESQUE. When you HEAR, or say "Orange Blossoms," what a surge of sweet imaginings (or associations) comes over you! Cut out the word "Blossoms" and say "orange" and see what your associations are. Of course, it takes a little longer to say the fuller term, but printers' ink is not so terribly

dear. We wish to hear from our friends, south and west, on this point.—E. G. B.

The 1915 National Convention

Just as we go to press an unofficial report says Denver, Colorado, has been selected by the Board of Directors as the most suitable city to hold the 1915 convention.

Denver — the most suitable city for the 1915 convention for the reason it is located near the center of the greatest honey producing area in the U. S. From crop report 1914. Every road leads to Denver. The Editor expects to take one of them. Will you be there too? Write the REVIEW office.

Field Notes From Michigan

Queenless Colonies

By FRANK ERIC MILLEN B. Sc. A., East Lansing, Michigan

It would be hard to estimate the percent of colonies lost during the fall and winter through queenlessness. Some seasons I am sure that loss is very considerable. It will prove a good investment for beekeepers to go through their apiaries and look for queenless colonies. The man who goes through his yard regularly detects these colonies at once, but those who do not look into the brood chamber but once or twice during the season may not notice these queenless colonies until they have dwindled badly.

It should not be necessary to state that a colony will do better with a young vigorous queen. A queen that is past her prime will seldom allow a colony to go into winter quarters in good condition. A poor queen reminds me of scrub stock, a man does not expect to raise high grade progeny from scrubs, yet apparently many beekeepers are trying to get good colonies, when they have no foundation. Improve your bees by securing good queens then try and raise stock from the best you have. You cannot do any harm that way and you may do much good.

Use of Water

Unless one has measured, in some way, the amount of water bees use during the season, from spring 'till fall, they would be astonished at the amount taken in. The pond shown here illustrates a useful and very economical kind for bees. An old iron wheel is set in a bed of concrete with a layer of cement round

the inside, finished off with a cement wash. A number of bricks and broken pieces of concrete are placed on the floor, this prevents the bees getting drowned, and allows more space for the bees to get a drink. A pipe leading from the pump fills the pond.

The pond was made because bees were so numerous round the well, that the ladies were often unable to get water. Now although the pond is not more than five feet from the well, the bees visit the pond almost entirely.

I have been in few yards this summer where there was as much brood in the hives as I found here, the fresh water, always there, seemed to stimulate the bees to a marked degree, and it is certain that this beekeeper will have his hives filled with young bees to commence the winter.

No doubt most bees find water, but if they have to go far away they must waste time. With a pond right close to the apiary, there is



a minimum loss of time, at the same time the beekeeper knows his bees are getting good water.

Fall Flow

So far there has not been a good flow of nectar from fall flowers in this section. Beekeepers should watch their colonies closely and be certain there are none near the starving point, where much brood has been raised the honey has disappeared quite rapidly.

The poor season is going to hit beekeepers very hard especially where they have to feed much sugar, many have to feed already. Remember though that the man who

wins out in the bee business, is the man who stays with the bees and has them in shape when the good time does come.

In last month's Review I spoke of selling honey below market value. Since then I have heard there are beekeepers selling good comb honey in Lansing for fourteen cents per pound. These men could have secured from sixteen to eighteen cents quite as easily as they secured fourteen. I know others that have secured the better prices without trouble. Wonder why it is a man will produce an article and then sell it below value.

The Secretary's Corner

GEO. W. WILLIAMS, Redkey, Ind.

An Open Letter to the Bee-Keepers

Redkey, Ind., Sept. 15, 1914.

I am constantly receiving letters asking about the National Bee-Keepers' Association, and the benefit it is to the members, I cannot give the time to answer each letter personally, much as I would like to do, but I will try and touch in a general way a few of the very many reasons why every producing beekeeper should join and retain his membership.

The National body is made up of the various state and local affiliated bodies. The membership fee to both is \$1.50, of which \$1.00 goes to the National and 50c goes to your local association. The \$1.00 pays your National dues, and in addition, pays for one year's subscription to the Bee-Keepers' Review, in addition to the other benefits that membership will give you.

The Review is owned and controlled by the Association, and is exclusively devoted to the beekeepers themselves.

Every producer needs it to keep posted on what is doing in the honey trade. We help our members buy their supplies and sell their honey, as you can see by the free list printed in each issue of those who have honey for sale. This list has sold many car loads of honey for our members, and helped those who

want to buy to find what they are looking for.

It is becoming certain that we can more and more benefit our members as we get a more and more complete enrollment of the producers. All lines of business are taking up the Association idea, and profiting by it.

The educational and social features are not the least of the benefits received.

If any class of people in the world enjoy getting together and "swapping yarns" more than do beekeepers, I have yet to find them, and the local and state meetings give opportunity for this social function, while the National body has to do with the wider business of a general nature.

The general prevalence of foul brood is rapidly weeding out the "let-alone" beekeepers and the business is getting more and more into the hands of specialists to whom the economical production and profitable marketing is of prime importance. In all other lines of production those interested are using association methods for "boosting their products". The beekeepers have been slow to grasp the possibilities along this line, and as a consequence both the price and consumption of honey have declined,

when compared with other similar products. We want to remedy this if it can be done, and want your help to do it. We will expect to receive your dues in the near future, making you a member.

You can send them direct to me, or to the Review, Northstar, Mich., or any of the directors.

I remain, yours,
George W. Williams,
Sec.-Treas. N. B. K. A.
Redkey, Ind.

We will not need a special "Honey Day" here in Indiana to dispose of our surplus this year, as the dry weather disposed of it before the bees gathered it. I think the Indiana crop will average about one case to the colony. All sold and calls for more.

The late fall rains have started the clover nicely, in spots where it was not killed below the ground. Some fields show up nicely, while others have none at all. The Alsike is springing up everywhere and will make a fair showing even if the white clover fails again. Every year demonstrates the fact that white clover can not be depended upon for a sure crop, and that alsike can. The only fault with alsike is that it does not last long enough.

How many of us will agree to secure one or more additional subscribers to the Review (making them members to the National Association at the same time of course) before the next annual meeting. If each of us will do so, we will double our membership and quadruple the effectiveness of the Association.

Cumberland, Ohio, Aug. 26, '14.
E. D. Townsend & Son,
Northstar, Mich.

Gentlemen:—Please send sample and price on extracted stock suitable to feed Bees. Crop a failure this year. Bees have not held their own since May 1st. In bad shape for winter.

Yours truly,
H. W. McKEE.

(We would not think of buying honey to feed bees, inasmuch as there are so many diseased among

Bear this truth in your mind, brothers, the Review is your own paper, and it is published to further your interest, exclusively. Every cent you pay to it comes back to you in value received. We have other splendid bee journals, published by able men, and the progressive beekeeper will get much value from them all. We need ALL our papers, but we MUST support our own paper for our own good. There is no good reason why EVERY producing beekeeper should not take the Review, and there is every reason why they should do so. Our managing editor tells me that he has arranged clubbing offers that are very satisfactory, and give extraordinary value. I am printing below a circular letter I am preparing to have printed, and if they will be of use to you, I will send you as many as you can use profitably. It is up to the Secretary of affiliated bodies and inspectors to push this matter, especially, but each one of us can assist in getting our neighbors to subscribe. Every dollar that comes in goes to make a better paper and a more valuable one for you, as no one else has more interest in the Review than you have. Remember that it is your paper, printed solely for you, and you should assist in pushing it. Sit right down before you forget, and write down the names of all your neighbors who should take the Review, and then make it in your way to present the matter to them at the first opportunity. Let's get together and boost the Association, and we will be in shape to boost our products better when the time comes.

bees whose spores are transmitted through the feeding of honey for winter stores or other purposes. If there is no disease in your yard, or in your neighborhood, **NOR NEVER HAS BEEN** and you have honey of your own production that you can be reasonably sure contains no spores of disease, it will be safe to feed it, otherwise feed granulated sugar syrup made of two parts sugar and one part water, for winter stores. If fed hot, the bees will take it more readily.)

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Making a Market for Five Hundred Cars of Western Honey

By WESLEY FOSTER, Boulder, Colorado

Given at the National Convention at St. Louis, February, 1914

It is a pleasure to appear before this convention and address you upon this subject for the prosperity of the western beekeeper is to me of very great interest. Unofficially I will try and represent the westerners' interests. MAKING A MARKET FOR FIVE HUNDRED CARS OF WESTERN HONEY IS a big proposition but it is one that we will have to handle, if there have not been seasons that it has already been done. The shipping crop of the west the past season has

not fallen far short of this amount and methods of distribution need improvement before we have to face another such a proposition. What one person has to say on this question amounts to little unless what he says will stimulate thought in scores and hundreds to bring about action for the solving of the problem. By united action it is solvable.

Our educational campaign carried on through the journals, farmers' institutes, departments of Agriculture, Beekeeping extension and

apiary inspection has borne fruit. Beekeeping methods have been improved and honey production increased. This improvement in beekeeping practice has gone on steadily for twenty-five years, and more; production has gradually mounted until now we have a condition approaching over-production. The over-production of luxuries is an easier matter than many of us realize. Honey is a luxury and will be for a long time to come, the agitation to put honey in the necessity class along with flour, potatoes, sugar, butter and eggs, sounds nice, but the trouble with it is that it will not work. Honey is like oranges, folks do not want them the year round. Oranges will likely remain in the luxury class for a good while. Do not gather the idea that I am not in favor of increasing the consumption of honey for that is just the burden of my thought. The people are going to have more and more luxuries and it is our business to see that Mr. Ford does not sell everybody in America an automobile and thereby force them to spread glucose on their bread. What we want is to see honey rated at least equal to gasoline as an American luxury.

The production of honey has increased more rapidly than consumption. We have cultivated the bee more eagerly than the markets. Our distributing system or lack of it has chronic indigestion every fall and winter. We honey producers must take a directing hand in the distribution of our product. When the buyers cease to buy and consignments are the rule you may know that there is a doctor of distributive ailments needed at once. It may be inhuman but we would prefer the consumer to have indigestion from consuming too much sweet than that our distributive system get clogged with several hundred thousand pounds of unassimilated honey. More people who are eating less honey must be enticed to eat more of the delectable sweet. If every city in this country consumed or distributed as much honey in proportion to population as some cities do, our production would be many years in catching up with demand. And again if all of our cities consumed as little as do some, the most of

the beekeeping specialists would have to go into other business.

Indications point to lower prices on honey during the next ten years and we already have higher prices on supplies. Sugar is now 75 cents a hundred lower than a year ago with good prospects for another drop in the price when the duty is entirely removed. The syrup interests now have the advantage in profit without raising their prices, while we beekeepers will have to content ourselves with higher cost of supplies. The only place where we will profit will be in lower cost of sugar, which is unimportant compared with the advance in supplies. Perhaps we can gain a little in lower parcels post rates and lower express rates? If we cannot gain here, we are losers.

The Colorado State Beekeepers' Association has begun one important work and wishes the cooperation of the National and all affiliated associations. We have a rate and transportation committee instructed to work for the following things:

The "loading in transit privilege."

The carrying of comb and extracted honey safely by Parcels Post.

The carrying of bees by Parcels Post

The transportation of carloads of bees at the live stock rates now in effect.

The adjustment of rates to do away with discriminative rates now in effect between different points on car and less than car lots of honey and supplies.

Our committee has begun work and we ask the appointment of a live committee of this body to work with us. We have asked the same thing of every western beekeepers' association and hope for response from a good proportion of them at any rate.

The western honey crop is the most important single factor affecting the eastern honey market. And so the east is just as vitally concerned with the proper distribution of this crop as is the west—the stability of the market demands it. The west is the producer and the east the manufacturer. We ship our honey out and ship in manufactured articles.

The argument that the west should consume all its production is as fruitless as to insist that the east should use all their manufactured articles at home. It may be

alright in theory but it is one of those things that practical men do not waste much time thinking about.

The organization of the National directly or through an auxiliary to direct the distribution of this shipping crop is a worthy program—it is the most important question before the American beekeeper today. We have the opportunity to solve this problem. The National needs to begin solving this matter to preserve its own life and usefulness. It is a problem big enough to command the attention of our best workers. It is capable of solution because other industries have organized themselves and solved the question in large measure. If the National does not attack this question we shall have to turn to some other means for accomplishing the desired results.

The first steps necessary have been done, we have our National

organ and have adopted grading rules for comb honey that are a very great advance over anything that has been in use in this country. The sale of supplies and the aiding in the sale of honey has been tried out and found practicable as well as profitable. All we need is an extension and broadening of the work already begun. If given the right start this work will build itself and make for solving the National's financial difficulties as well.

The matter of an organizer has been suggested and is essential, but first we want a definite program for the organizers to work on. We must have a point where this organization touches the beekeeper and the organizer together with our National organ will supply this requisit. It is not so necessary that we have a large membership in

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The Wintering of Bees in Idaho

By JOSEPH J. ANDERSON, Salem, Idaho

Given at the National Convention at St. Louis, February 1914

The class of beekeepers, or rather keepers of bees, everywhere to be found, who conduct their business on the theory that bees work for nothing and board themselves, are the ones who find that the wintering problem is a most worrisome and vexatious one, and come to the conclusion that Beekeeping is a precarious business, misleading and disappointing.

Recently (January 10th) a neighbor beekeeper informed the writer that out of a hundred and thirty-five colonies, he had lost already from fifteen to twenty and that he expected many more to die, the result of starvation, and he had taken no pains to give his bees any protection until after Christmas. "I guess I am too careless to keep bees," he remarked, and I agreed with him.

Just think of it: during the summer this individual had worked these industrious little servants to the utmost, robbed them of the

fruits of their labor and then left them to freeze and starve. What would the law do to a man who would serve his faithful horses in such a manner? Surely before the omnipotent judge one is as guilty as the other. Saying nothing morally of the thing, such an individual is recreant to his own material interests, suffering the property that yields him by far the greatest returns—dollar for dollar invested and time spent—of all his possessions.

In beekeeping, as in all other lines of endeavor, the old rule holds good. "There is no excellence without great labor." If an individual will exercise the same quality of painstaking care with bees that is shown by the successful orchardist, sheepman, cattleman or breeder of horses, there is no reason why his business should not be just as safe as either of these, and withal as lucrative, and with far less worry and expense. And the winter-

ing problem need have no serious forebodings for him.

The wintering problem, to be sure is of prime importance. Successful wintering is absolutely essential to successful beekeeping. And this is measured not only by the number of stocks that live through the winter, but also by the strength of the individual stocks.

There are Two Absolute Essentials to Good Wintering

First ample stores. Second, a sufficient force of young healthy bees. Given these two conditions, and reasonable protection furnished, the wintering problem has been stripped of its terrors. Lacking either of these two, no amount of protection can suffice.

It is evident, therefore, that preparations for wintering should begin the previous spring and be carried on through the summer. The careful apiarist will see that his superannuated queens are superseded, so that with young and vigorous queens, brood rearing will go on until the close of the honey flow, being kept up if necessary by stimulating feeding. Weak or queenless colonies he will double up to give the required strength.

Before the cold autumn days, all

colonies should be fed either with filled frames of honey, saved for the purpose, or with syrup by the use of feeders. No other food can quite equal good honey for wintering. Each colony should have at least thirty pounds of honey. Each hive should be weighed, as the method of lifting is not sufficiently accurate. If a single story, ten frame hive, with combs, no bees, will weigh thirty to thirty-five pounds, then the hive with bees prepared for winter, must weigh at least sixty-five pounds.

While a strong colony with abundant stores may live through the winter even in climates where there is a great deal of below-zero weather if left without protection on its summer stand, protection of some sort is of great advantage, since the bees come through winter in much better shape for spring work, the colony reaching its maximum strength in time to take full advantage of the honey flow. Without protection the loss in numbers will be much greater and the colony is not likely to reach its maximum until the honey flow is partly, or in many cases, almost over.

The chaff hive, properly construct-

(Continued on page 385)

Apicultural Education

By MORLEY PETTIT, Ontario Provincial Apiarist

Read at Annual Convention of National Beekeepers, St. Louis, Mo.
Feb. 17th, 1914

Technical education helps the workers by enabling them to better understand and thus take more pleasure in their work. It increases their efficiency, reduces the cost of production and improves the quality of the product. Business education helps the business man to reduce the cost of distribution and by advertising to increase consumption. These help both producer and distributor. Education provided at public expense should help also the consumer by reducing the ultimate cost of the product to him.

Apicultural education provided at

public expense must consider all three classes. It must take into account the right to keep bees of a sufficient number of persons to collect the nectar which nature places in the flowers from year to year, the right of a sufficient number of distributors to get this to the consumer and the right of all men to satisfy their craving for sweet with this most delicious of nature's products.

Apicultural education should include both production and distribution and should and must go hand in hand with investigation. In fact,

the latter must come first because it provides the material, the ideas, with which our work has to do.

True education consists in answering questions and begins with the child at birth. Long before the question can be framed in words the inquiring senses of the infant reach out for information, and happy the child whose parents and friends intelligently and honestly answer all its questions. It is true these questions require directing and stimulating, but there can be no true education where there is no inquiring mind. Education then consists in stimulating, directing and informing the inquiring mind. That is the first half of it. The other half leads the mind into ethical and logical habits of thought, trains the eye to see, the ear to hear, the hand and foot to perform accurately and quickly the duties assigned them.

Now as to methods of Apicultural education. It begins with enquiry and enthusiasm.

1st—The beekeeper talks bees to his friends. Some of them get bees and start to investigate and observe.

2nd—Two or three beekeepers exchange experiences and ideas.

3rd—They call a meeting where a dozen or more discuss bees in an organized way.

4th—Books and papers on the subject are written and read.

5th—Qualified speakers are secured to address conventions.

6th—Trouble comes in ways of winter loss and disease, causing more earnest investigation and inquiry.

7th—Experts or inspectors are sent by the association or the government to give individual instructions.

8th—The government appoints a man to devote his whole time to the subject and his work is almost wholly educational. He starts by getting a knowledge of the field, collects a list of the beekeepers, visits them, writes to them, replies to their inquiries, helps them organize for mutual benefit, directs their investigations by suggesting experiments for them to try. Courses of lectures are given on the subject at Apicultural colleges and at agricultural classes throughout the country. Bee institutes, bee dem-

onstrations, etc., follow in the well known order.

The result is an awakened interest in the subject of bees and honey over the whole territory. Many people who have a few bees are increasing their apiaries by leaps and bounds. The price of bees goes up and the production of honey is increased. This of course has a tendency to weaken prices. It does weaken and for the time lower them.

So far we have spoken of education centered on the producer helping him to produce more. Indirectly the consumption of the product is increased because of the public interest aroused; but some sections soon produce a surplus, others, such as cities and localities where the crop has failed, are under-supplied. Where the surplus is, the price is lowered and much more is consumed. Where there is a scarcity the price advances to a certain point and consumption is greatly reduced. Because of the scarcity people learn to substitute other things for honey and the market in that locality is permanently injured. Education must here step in to assist distribution; teaching the beekeepers how to discover the areas of surplus and of scarcity and to even up the supply. This of course, must be accompanied by the cooperation of the beekeepers at large.

That word "cooperation," by which so many are attempting to conjure, at present opens a whole field for investigation and education. Suffice it to say that my present belief is that cooperation of beekeepers will progress slowly in this generation. If its principles were taught to all children we might hope for a wide-spread organization by the time they became men and women.

How about the education of the consumer? I will place first in importance a house to house canvass by the beekeeper himself. He can talk of his goods and inspire confidence by his knowledge of the production, care and use of honey. Next the mail order business where the beekeeper sells by letter direct to the consumer. Next the display of honey in grocery stores either direct from the beekeeper or through wholesale channels. Here the groc-

er needs to be educated and interested to induce him to bring honey to the notice of his customers. Exhibits and bee demonstrations at fairs, popular lectures and articles in the press, newspaper and magazine advertising, all play an important part.

In conclusion let me summarize:

apicultural education must take into account the producer, the distributor and the consumer. As far as possible the producer should be his own distributor and should take his part in educating the consumer. An increased interest on the part of producers increases the distribution and the consumption.

The Feeding of Sugar to Bees

By S. D. CHAPMAN, Mancelona, Mich.

Given at the Northern Michigan Convention, Petoskey, Michigan
March 1914

Feeding sugar to our bees is a subject I have been watching pretty closely for a number of years. In fact I have had quite a large experience in feeding sugar to my bees as well as experimenting along these lines. In discussing this subject I wish to confine myself strictly to our specialists that are running their bees for extracted honey. We all know that colonies run for comb honey are in better condition for winter than colonies run for extracted, where we take all of the honey from the upper stories.

First, is it profitable to take all the honey from our bees and then feed sugar for winter stores? One pound of sugar made into syrup is hardly equal to one pound of sealed honey as a winter food for our bees. Some five or six years ago in my home yard I had plenty of solid combs of honey to feed over 100 colonies. This left about 70 colonies with scarcely any honey. It was very warm and dry that fall and no honey came in after July 15th. I fed those 70 colonies on sugar syrup to carry them through till they could make their own living the next June. I could see no difference so far as the wintering of these colonies was concerned. But the following spring was very early and it remained warm till just the time willow and soft maple were coming in bloom. Then it turned cold and we had over one foot of snow and really, we had severe winter weather. Our bees got no pollen from any source during

this period. After while it turned warm and the fruit trees were just coming in bloom when it turned cold again and for twenty-six days our apple trees were in full bloom, the weather remaining a little above the freezing point during most of this time. Consequently our bees got no pollen till after the 20th of June. It was a remarkable season. But it gave us a chance to compare those colonies building up on natural stores with those fed sugar syrup. At the close of the season, as near as I could judge the colonies on natural stores brought in about forty per cent more honey than those fed on sugar syrup. It is just as necessary that bees have pollen, as it is honey, to build breed up in the spring of the year. If they have nothing but sugar stores and no pollen comes in, brood rearing stops. While the colony with natural stores will do some breeding. More than half our season in northern Michigan, bees cannot get the pollen they require to build up rapidly in spring. For this reason every beekeeper who extracted all the honey from his bees and then feeds on sugar syrup is a heavy loser in the end.

In the Bee-Keepers' Review for December is an article written by Mr. Bartlette of Michigan. In that article he speaks of feeders. I am not real certain whether he recommends two feeders for one hive, or two hives for one feeder. I did not think at the time it was two feeders for one hive, for he says "If

your bees are short of stores in the spring, feed on sugar syrup. Never under any conditions feed honey." I mention this article to show you that our specialists in northern Michigan are filling the brood nests of their colonies in the fall with sugar syrup and they go through the same operation in the spring.

Today, I have over 200 solid combs of honey on hand for spring feeding and at present time it does not look as though I would need to feed a pound this coming spring. For years at extracting time I have left one super of honey on the hives. This super contains the lighter combs of honey and I try to have about twenty pounds of honey to each colony for winter stores. By doing this way I seldom have to feed sugar. When I have no honey to feed, certainly I feed sugar syrup. But beekeepers in northern Michigan are feeding ten pounds of sugar syrup where they should feed only one.

Now give me your attention and I will try and show you the effects of taking away all the honey and then feeding up on sugar in syrup. Mr. Bartlette says he extracts about August 1st. Let us go into his yard a few days after extracting and what do we find? We see colonies actually starving to death. Yes? They are removing the brood from the combs. Not only Mr. Bartlett's bees but every one of you, that took all the honey away at extracting time. The season of 1912 I am sure you were all caught. Now I want to ask you Fellow Beekeepers, after your colonies have brought in from 100 to 300 pounds of the nicest honey, are they not worthy a few pounds of their natural stores for their own use? Again, let us see the effect it has on the price of our product. To explain this I will refer to my own bees as I am better acquainted with them. In the spring of 1912 I found one of my cellars in an outyard had caved in, probably, early in the fall and more than one-half of the bees were dead and the remainder were about worthless so far as getting any honey from them was concerned. My other yards did well.

Suppose I had taken 30,000 pounds from them that season and that is very near what I would have taken provided

I had taken all the honey from their upper stories. In a few days my bees would have been in a starving condition and I should have had to carry my bees till the following season on sugar syrup. I cannot tell how much it would take to carry them through but I would not want to risk them on less than 10,000 pounds, or about 25 pounds per colony. If by feeding this sugar syrup I would have been able to have put in the neighborhood of 10,000 pounds more honey on the market and that too, on a market that is already over-stocked.

In the fall of 1912 I sold the larger part of my honey early in the season at 9 cents a pound in ton lots. Now by feeding sugar syrup to my bees I could put 50 pounds more honey on the market than I could by letting the bees have 10,000 pounds of natural stores. If all the beekeepers in the U. S. are feeding their colonies as much sugar syrup as the beekeepers are here, it will take eight figures to express the quantity of sugar fed to the bees.

If the price of honey is governed by the supply and demand and the price falls in proportion to the extra amount of honey we put on the market by feeding sugar syrup to our bees, I would not look for 9 cents a pound. I should expect about 6 to 7 cents for an extracted honey.

In making these comparisons I would say that in 1912 the honey crop was hardly up to the average, while in northern Michigan we had a good crop of honey and received a good price. About one year in three our bees gather a little fall honey. This honey is dark in color and if put on the market the price is low. For this reason beekeepers leave this honey in the hives for winter stores. I often think how the bees look forward and appreciate such a season.

Now I have come to the worst phase of the whole business of feeding sugar to our bees. Really it hurts me to read before this convention what I feel it is my duty to do. But I think it is time that the beekeepers of northern Michigan should cooperate if we expect to save our reputation as beekeepers. You may look over all profes-

sions and you will not find as honest and clean a lot of men as the beekeepers of this association. In this respect it is remarkable and I feel proud to be numbered as one of you.

We all know it would not be safe for one of us to adulterate honey and put it on the market. Financially, you cannot make anything.

(To be concluded in November)

Notice to Illinois Bee-Keepers

The twenty-fourth annual meeting of the Illinois State Bee-Keepers' Association will be held at the State House on Thursday and Friday November 19th and 20th, 1914.

Hon. H. E. France of Wisconsin will be with us—his subject will be "Short Cuts". Prof. J. G. Mosier, University of Illinois, his subject "Sweet Clover". Mr. C. P. Dadant of Hamilton, Ill., and Dr. E. F. Phillips of Washington, Subject, "Temperature and Moisture of the Hive in Winter."

Come prepared to help make it a good meeting.

Jas. A. Stone, Sec.

Fall Convention of the Connecticut Bee-Keepers' Association

In the old Senate Chamber, State Capitol, Hartford, Conn. Saturday, October 24th, 1914.

Morning session devoted to informal gathering, payment of dues, etc.

Afternoon session, regular business report of Connecticut Fair Committee and addresses.

It is expected that important action will be taken at this meeting relative to the establishment of an apiary at The Connecticut Agricultural College for which the association has been working for several years.

The program Committee announces the following:

Mr. O. F. Fuller of Blackstone, Mass., President of Worcester County Bee-Keepers' Association and originator of the famous "Fuller Candy" for winter feeding will address us on "Experiments with Bee Foods," demonstrated, and "Rearing Queens in the Brood Chamber with a Laying Queen."

Those who failed to hear Mr. Fuller at Amherst on June 12th last

year should not miss this opportunity.

The remainder of the program follows:

Lyman C. Root—(Subject to be chosen.)

W. K. Rockwell—"Signs of a Good Queen."

John Thorret—"Wintering."

Question box etc.

L. Wayne Adams,
Secretary.

15 Warner St., Hartford, Conn.

Louisiana State Bee-Keepers' Association

At a meeting of beekeepers held in Shreveport, July 11, a state organization was formed with G. Frank Pease, president, and L. T. Rogers, secretary-treasurer. It was the sense of the meeting that they affiliate with the National Association, also that a day be secured at the State Fair, and a call made for a meeting on that day.

All the instructions have been complied with. After considerable correspondence the required membership was secured and forwarded to the National and we are now a branch of that association.

Mr. Louis N. Brueggerhoff, Secretary of the State Fair, has designated Monday, November 9, for our celebration at the Fair. A call has been made for a meeting of the association at the Fair Grounds at 10 o'clock on that day for the purpose of transacting any business that may properly come before the body, and it is earnestly desired that everyone interested in bees will be present. An endeavor is being made to secure good speakers to make talks on bee culture.

Those wishing to make exhibits at the Fair should at once take the matter up with Mr. Louis N. Brueggerhoff, Secretary of the Fair, Box 1100, Shreveport, La.

Anyone desiring to become a member of the association may do so by sending their dues to L. T. Rogers, Box 361, Shreveport, La. The dues are \$1 a year for the National, and 50 cents a year for the State. National members will receive free The Bee-Keepers' Review, official paper of the National Association. You may belong to the State association and not the National if you so desire.

G. FRANK PEASE, President.
L. T. ROGERS, Sec'y-Treasurer.

Bee-Keepers' Meet at Clarinda, Iowa

The Iowa summer meetings continue with unabated interest. The seventh held at Clarinda on Aug. 12th was attended by a considerable number of beekeepers from Missouri as well as from Iowa. E. J. Baxter and son, C. B. Baxter of Nauvoo, Illinois, were also present. M. E. Darby, state bee inspector of Missouri and E. J. Baxter were the principal speakers. The day was very pleasantly spent in the Strong apiary where those present enjoyed looking over the queen rearing yard and equipment and indulging in informal discussion of the many questions of interest to bee men. Only one of these summer meetings still remains to be held and we feel that the series as a whole has been very successful.

FRANK C. PELLETT,
Atlantic, Iowa

The officers elected for the ensuing year of the Texas State Affiliated Association are:

President—J. B. King, Batesville, Texas.

Vice Pres.—Frank Talbot, Pear-sall, Texas.

Sec.-Treas.—H. E. Graham, Gause, Texas.

The Review extends thanks for

the twenty-one subscribers secured at the convention.

The National Beekeepers' Association has previously held conventions at: Albany, N. Y. in 1910; Minneapolis, Minn., 1911; Cincinnati, Ohio, 1913, St. Louis, Mo., 1914.

At the time this number of the Review goes to press, the directors are considering the following invitations for the holding of the 1915 meeting next February: Philadelphia, Pa., Des Moines, Iowa, Denver, Colo., San Francisco, Calif., Syracuse, N. Y., Detroit, Mich., Nashville, Tenn., New Orleans, La., Atlantic City, N. J., New York City. We hope to be able to announce the place decided upon in the November Review.

Last Notice

If you have neglected to send in your proposed change in the National Constitution until now, "do it today," for they will be published in the November number of the Review. Remember if you do not get your proposed change to this office before the 20th of October, you will be everlastingly too late and no action can be taken on it at the February, 1915 meeting of the delegates.

Notice to Secretaries

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we are very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois..... 117
P. R. King, Ohio..... 34
Gus Dittmer, Wisconsin..... 23

H. E. Graham, Gause, Texas...	22
E. G. Carr, New Jersey.....	16
H. E. Gray, New York.....	16
E. J. Winder, Utah.....	15
P. E. Crane, Vermont.....	15
J. S. Whittemore, Massachusetts.....	14
L. T. Rogers, Shreveport, La.	14
S. W. Snyder, Iowa.....	13
Dr. L. D. Leonard, Minnesota	11
Geo. W. Williams, Indiana...	11
B. N. Gates, Massachusetts...	9
Henry C. Barron, New Mexico	8
J. W. VanLeenhoff, Puerto Rico.....	7
C. H. Stinson, Idaho.....	7
O. H. Schmidt, Michigan.....	3
J. F. Diemer, Missouri.....	3
H. Wilson, Oregon.....	3
L. C. Dadant, Chicago, Northwestern.....	3
Alwin P. Heim, California....	2
F. C. Bowman, Idaho.....	2
R. D. Bradshaw, Notus, Ida..	2
J. B. Ramage, N. Yakima, Wash.	1
H. C. Klinger, Liverpool, Pa..	1

Each copy of your much appreciated Review is closely read with interest.

Am writing you for information regarding the construction and use of a cellar.

We have about 1200 colonies of bees and wish to make a cellar for same, for the coming winter. We are in the mountains with an altitude of 6500 feet and zero weather is very common, but it is a dry healthful cold. Am absolutely without experience in wintering bees. Would appreciate the details for construction of one to accommodate the above number of colonies. How deep below the level of the ground would you make it and would you bank up the wall 2 or 3 feet above the level of the ground to have a little light if it is needed. How would you stack them so as to have room for caring for them and keeping the place swept, etc. What temperature do you prefer for the cellar.

Thanking you in advance for your assistance, I have the honor to be

Yours truly,
Dr. D. W. Gibson.

* * * *

(Dr. Gibson: With the experience we have had and seen would advise you to build two cellars for your twelve hundred swarms of bees. They should be not less than 20x40 ft. with a seven foot wall. Build the side walls nine feet high, then bank up two feet above the ceiling of the cellar to keep out frost and avoid the changes in outside temperature. Over all a good roof should be provided. For a top covering for the cellar, a foot of sawdust, planer shavings, or, perhaps forest leaves would do. It is advisable to build in dry sandy soil, in which case perhaps an earth covering will do as well as any. With so many bees in a cellar, you will need a ventilator at the back end and an intake at the front to admit fresh air and regulate the temperature. The intake can be at one corner of the cellar and the ventilator in the opposite corner. A foot in diameter tile ought to be sufficient as an intake for fresh air and if it could be placed below the frost line and extend one hundred feet from the cellar, to the open air the admitted air would be

tempered nearer the desired amount before entering the cellar. The ventilator can be made about two feet in diameter, with arrangements to regulate as desired. It should extend to near the bottom of the cellar and the upper end to the attic.

The hives are placed in the cellar on benches built up 10 inches above the cellar bottom. The bees are tiered up, one above the other, five high. A bench for a single row of hives is built along the side of the cellar, then an alley of about three feet is left, when a double bench is built holding two rows of hives, facing the alley. The single row next the wall, also faces the alley. Rows of double tier benches are now made at intervals of three feet clear across the cellar when another single bench is made against the opposite wall. Of course, more or less than five hives high can be put in according to the number one desires, but we have had rather better success when the hives were not less than 10 inches from the cellar bottom and not less than a foot from the ceiling. The floor containing the poisonous gases and the ceiling or top of the cellar being too warm at times. The orthodox temperature is 45° Fr. but we have had very good results with cellar wintering with a temperature varying eight degrees either way from this. Always keep in mind that it is more the stores one's bees has to winter on than any one other condition, that goes to make up good wintering of bees. Ed.)

Hagerman, New Mexico, U. S. A.
August 17th, 1914.

The Beekeepers' Review:—The honey harvest for the Pecos Valley, New Mexico has gone glimmering for 1914. Usually clover about August 20th with an average of about 75 pounds honey surplus per colony. This season closed nearly a month earlier, say Aug. 1st with not an average of 25 pounds surplus per colony.

Yours very truly,
HENRY C. BARRON.

Secretaries should ask for a stock of Official Receipt Cards for membership dues. They are free for the asking. Address, The Beekeepers' Review, Northstar, Mich.

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzel, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.
G. M. Withrow, Mechanicsburg, Ill.

HORSEMINT

Wilmon Newel, College Station, Tex.
Alfred L. Harlt, Elmendorf, Texas.
A. L. Krueger, New Ulm, Texas.
H. E. Graham, Gause, Texas.
H. D. Murry, Mathis, Texas.

RASPBERRY

J. N. Harris, Mancelona, Mich.
C. J. Freeman, Bagnall, Mich.
O. H. Townsend, Butterfield, Mich.
F. D. Stephens, Box 383, West Branch, Mich.
E. A. Stoddard, R. No. 2, Mancelona, Mich.
F. C. Hutchins, Santa Clara, N. Y.

ALFALFA

J. H. Stoneman, Blackfoot, Idaho.
A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander, Wyo.
Webber Bros., Rt. 2, Blackfoot, Idaho.
J. Edgar Ross, Brawley, Cal.
Robert E. Foster, Rifle, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
W. H. Pennington, Ontario, Ore.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
Arizona Honey Exchange, Tampe, Arizona.
C. Stimson, No. 1, Holly, Colo.

AMBER

C. F. Smith, Cheboygan, Mich.
E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
G. Frank Pease, Shreveport, La.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Quirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.
J. M. Cutts, R. 1, Montgomery, Ala.
A. L. Krueger, New Ulm, Texas.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.
N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franksville, Wis.

R. A. Schwarzkopf, Tilleda, Wis.
C. D. Townsend, Stockbridge, Mich.
E. D. Townsend & Sons, Northstar, Mich.

Frank Kittinger, Caledonia, Wis.
W. H. Townsend, Hubbardston, Mich.
John Homack & Son, R. No. 3, McGregor, Iowa.

B. A. Aldrach, Smithland, Iowa.
E. Woodall, Goodman, Wis.
A. F. Roska, R. No. 2, Swartz Creek, Mich.
E. H. Canfield, Carson City, Mich.
F. W. Lesser, E. Syracuse, N. Y.

WHITE CLOVER

E. F. Smith, Chadwick, Ill.
R. C. Zeader,
C. H. Burrows, Oran, N. Y.
E. B. Rosa, Monroe, Wis.
F. M. Dittmer, Augusta, Wis.
B. F. Schmidt, North Buena Vista, Ia.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co., Wis., No. 19.
Byron S. Hastings, Rt. 5, Brookville, Ind.
E. A. Doney, Dixon, Iowa.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snyder Bros., Center Point, Iowa.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, LeMars, Iowa.
A. S. Crotzer, Lena, Ill.
W. H. Pearson, Mitchellville, Iowa.
M. H. Lind, Baders, Ill.
Wm. Fox, Withee, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prish, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
Niels A. Nelson, Dike, Iowa.
Geo. E. Capwell, Cottonwood Falls, Kan.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Dell E. Berryman, 2308 20th ave., Central City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
Wm. E. Dailey, R. 3, Woodsock, Ill.

ORANGE

James McKee, 559 Grand Ave., Riverside, Calif.

BUCKWHEAT

Jas. McNeil, Hudson, N. Y.
E. A. Duax, Chippewa Falls, Wis.
Wilmer Clarke, Eastville, N. Y.

HWAJILLA

Frank Talbot, Pearsall, Texas.

SAGE

George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than two-thirds cells, exclusive of the row adjacent; sections with more than 60 unsealed patched up sections; sections weight to the box; leaking, injured, or

New York—"Honey is beginning to move, just now there is quite a demand, especially for Comb Honey. Extracted is plentiful. Southern and West India coming in, in large quantities, is holding the prices of higher grade goods down.

Fancy Comb Honey is bringing as high as 17 and 18c. Off grades as low as 12c.

September 14, 1914.

Chas. Israel Bros. Co., Inc.

Chicago, Ill.—There is a firm feeling in the choice grades of white comb honey and sales are now being made chiefly at 16c per lb., and where the wood section is allowed for it is bringing 17c per lb. The No. 1 and off grades bring from 1c to 3c per lb. less. Amber grades are ranging from 10c to 13c per lb.

Extracted white grades such as clover and linden and button sage sell chiefly at 9c per lb. with the western white

alfalfa selling at 7c to 8c per lb. Amber grades range from 6c to 8c per lb., according to color and quality.

Beeswax market is easier, but yellow wax free from sediment brings 34c to 35c per lb.

R. A. BURNETT & CO
173 W. South Water St.

September 15th, 1914.

ALBANY, N. Y.—Comb honey coming forward very slowly and seems to be little to come at least from this vicinity. We quote Fancy White Comb 18, Medium 16-17, Mixed 15, Buckwheat 14. Extracted dull but demand for new crop improving at 8½-9 for white, 7½-8 for amber, 7½ for buckwheat. Beeswax 32 to 34 for clear stock.

Respectfully,

Sept. 25.

H. R. WRIGHT.

In answering advertisements please mention the REVIEW—it helps wonderfully.

The Wintering of Bees in Idaho

(Continued from page 376)

ed seems to furnish ample protection in the coldest climates, but it is bunglesome and awkward to handle and the first cost is considerable.

For Outside Wintering of Single Walled Hives. Two Opposite Theories of Packing are Followed.

The first is based on the theory that there should be provision for upward ventilation, allowing moisture and poisonous gases given off by the bees to pass upward and away, was advocated by such prominent veterans as Father Langstroth, Alexander and others and it seems is most commonly used. Absorbent material, such as sawdust, planeshavings, forest leaves or chaff is placed over a quilt or cushion on the hive, thus taking off gradually the moisture arising from the cluster of bees. This, of course, prevents condensation and freezing of moisture, thereby keeping bees and hive thoroughly dry, a prime essential for successful wintering. If the quilt of cushion be not too thin or porous, so as to allow too rapid a dissipation of heat from the cluster, this method is good and produces excellent results. The sides of the hive as well should be given protection.

Then there is a large number of beekeepers who argue that the hive all round the top should be hermetically sealed, using thin super covers; these the bees quickly seal with propolis, leaving no crack or opening. Mr. L. A. Coblentz of Rig-

FOR SALE—Fine well ripened white clover honey in 60 pound cans, also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—One car Alfalfa extracted honey. Address W. H. Pennington, Ontario, Ore.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Extracted honey, car lots or less. Alfalfa or Alfalfa and Sweet Clover mixed. Could use some from other sources. W. HICKOX, Forsyth, Mont.

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind. tf

WRITE US for prices on car lots of Fine Alfalfa Extracted honey to be delivered after July. Address MARTIN BROTHERS, Lander, Wyoming.

FOR SALE—Orange honey, 1914 crop. Packed in 60-lb. cans, 2 in a case, net weight. Price 9c per lb. Sample free. JAMES McKEE, 559 Grand ave., Riverside, Calif.

WANTED—Extracted honey. Send sample and best price, also quantity you have for sale and how put up. HENRY J. ZINN, 1135 Wyo. Ave., Forty Fort, Pa.

WANTED—To buy 3000 lbs to a car load of Comb and Extracted honey. Iowa, Wisconsin or Michigan preferred. Quote prices. W. H. HYDE, New Canton, Ill.

FOR SALE—Horsemint extracted honey. Also dark honey from Huckleberry. Put up in new 60 pound tin cans. Write for prices. A. L. KRUEGER, New Ulm, Texas.

FOR SALE—A carload of fine Clover and basswood blend of extracted honey, in New York state. Parties interested kindly address CARLOAD, Care THE BEE-KEEPERS' REVIEW, Northstar, Mich.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS — Lowest price. PEARL CARD CO., Clintonville, Conn.

White Clover honey for sale. Albert Tien, Falmouth, Mich.

COMB HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We will pay 32c per pound for nice, clean, bright yellow Beeswax. Chas. Israel Bros. Co., 486 Canal St., New York. Established in 1875.

FOR SALE—3000 lbs. extra fine clover and basswood blend of extracted honey, ripened on the hives and stored in new 60 lb. net tin cans. This honey is at my home in Bay City, Mich. Write for free sample and price stating amount you can use. Address O. H. Schmidt, 914 Court St., Reading, Pa.

RASPBERRY HONEY—Left on the hives until it was all sealed, and thoroughly ripened, it is thick, rich and delicious. Put up for sale in new 60 lb. tin cans. Price \$6.00 per can. Sample by mail for 10c, which may be deducted from an order for honey. **ELMER HUTCHINSON**, Lake City, Mich., R. F. D. No. 2.

BEEES AND QUEENS

FOR SALE—Ninety-four colonies of bees in nine frame hives. Also about 200 supers and other equipment for working them. Address **A. S. CROTZER**, Lena, Ill.

FOR SALE—15 colonies bees. Also 15 new 8 frame hives and a quantity of foundation. **Clyde Cobb**, Belleville, Ark.

THREE-BANDED ITALIAN queens, bred for business; untested, 75 cts. each; 6 for \$4.25. Satisfaction guaranteed. **CHARLES ZWEILY**, Lemont, Ill.

It is your right when buying queens to demand a pedigree. We send one with each order for queens. **Border City Apiaries**, 223, N. B. St. Ft. Smith, Ark.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. **D. J. BLOCHER**, Pearl City, Ill.

REDUCED PRICES for Sept. and October. Untested queens of my 3-banded Italian stock. One for 70 cts., 6 for \$3.90, 12 or more at 60 cts apiece. No disease and no better queens at any price. Full colonies and several apiaries cheap. **H. D. MURRY**, Mathis, Texas.

SPECIAL RATES for September. Untested queens of my 3 banded Italian stock at the following prices: 1 for 70c, 6 for \$3.90, 12 or more at 60c apiece. No disease and no better queens at any price. Full colonies and a number of apiaries for sale. **H. D. MURRY**, Mathis, Texas.

by, Idaho, is a successful follower of this method, placing above the thin super cover a tray containing sawdust or plane-shavings, then the hive cover and over all a telescope reaching to within two inches of the bottom of the hive. He uses bee escape boards with bee escapes removed.

These two methods as stated, are directly opposite, yet each seems to produce good results. The first permits the moisture arising from the cluster to pass slowly out into the packing, where it is absorbed instead of condensing and freezing on the cold lid and sides of the hive, melting with the warm days and wetting bees and hive.

The second conserves all the heat of the cluster and prevents the deposition of the moisture by so protecting thin super and sides of hives that they do not get cold enough to condense the moisture. Its adherents argue that the entrance, without any upward escape, affords sufficient ventilation.

Both methods accomplish the great desideratum—keeping the hive and bees dry.

It would seem, however, that in the hermetically sealed hive, the air would eventually become so saturated by the constantly arising moisture from the bees, that a trifling fall in the temperature would reduce the air in the hive below the dew point and cause the moisture to be deposited. The small opening the super cover as made by Mr. Coblentz in removing escapes would provide for this—a sort of compromise between the two methods.

Readers of "Gleanings" are familiar with Mr. Hollerman's method of packing four colonies together in one winter case, which has proved so successful that he has discarded his expensive cellar.

Cellar wintering, where cellars are properly constructed and ventilated, so that the temperature may be regulated to remain warm enough in the cold winter weather and cool enough in the warmer days of spring until fairly well settled weather, seems to give perfect results.

In the writer's own cellar, first used this winter, the hives are tiered up five feet high, half of

them with lids on and half without lids, covered only by two thicknesses of cloth. Those with lids on seem to be a little more restless than those without and from some of them a little water exudes at the entrance, but absolutely nothing from those without lids.

In Idaho a number of successful beekeepers place bees in a row, side by side, facing the east, packing in between with chaff, removing all covers; three or four thicknesses of cloth are placed over frames, straw and chaff is stacked behind and on top a thickness of one to two feet, drawn to a cone like the top of a hay stack, and on the sloping top are boards lengthwise of row, lapped so as to shed the rain; in some instances only two boards are used on top of the comb. By some tar paper, cut in proper lengths, is used to cover straw and all arranged as above stated. The ends of the strips of paper are tacked to the front of the row of hives, then drawn up and over straw and back to the ground behind, being drawn tight and weighted at back. The paper covering is started from north end of row so that prevailing winds from the southwest will not blow under the laps.

In some cases hives are tarred up two high. By way of experiment the writer has packed fifty colonies as follows:

The hives are set in a row side by side; on each hive is a bee escape board, escape removed, an opening one and a half inches long is made on the rim of this board for use as an entrance; a thickness of burlap is placed on this board; over this a tray of chaff, then the hive cover. The hives are then banked up all round with dirt, the only opening being the one mentioned at the top. On the twentieth of January the fifty nuclei so packed, were all alive and apparently in good condition. The outcome in the spring is awaited with interest.

If in addition to the two absolute essentials—ample stores and plenty of healthy bees, the beekeeper will furnish sufficient protection, he can scarcely fail of successful wintering.

FOR SALE—A fine grade of Clover extracted honey; also some, blended with basswood. New 60 pound net tin cans, two in a case for shipment. Sample free. Address C. D. TOWNSEND, Stockbridge, Mich.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

FOR SALE—1000 colonies of bees in 10 frame hives. Located in 10 apiaries in the Imperial Valley, where crop failure is unknown. Profits for five years, have averaged more than 100 per cent annually. Owner retiring from active business. J. Edgar Ross, Brawley, Calif.

DON'T WORRY—Get your queens from Murry. Best 3-banded stock obtainable. Reared by latest scientific methods. No better honey-gatherers anywhere at any price. No foul brood or other disease. Tested, 1 for \$1.00; 6 for \$5.00. Untested, 1 for 70 cts., 6 for \$4.00. Bees by the pound. Write for prices. H. D. MURRY, Mathis, Texas.

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5 $\frac{3}{8}$ in. depth supers nailed and painted (220-10 fr. 40-8 fr. ext. sup. 5 $\frac{3}{8}$ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address WM McKIBBEN, Ontario, Ore.

QUEENS by return mail or your money back. Guaranteed purely mated. J. E. Hand strain of 3 Banded Italians bred for gentle Honey gathering and wintering. State inspector's certificate. Select untested 1, 75c.; 6, \$4.; 12 \$7. Tested 1, \$1.; 6, \$5.; 12, \$9. Select tested 1, \$1.25; 6, \$7.; 12, \$13. Write for price on large orders. J. M. GINGERICH Arthur, Ill.

FOR SALE—Three Banded Italian Queens, bred from the best honey gathering strains that are also hardy and gentle. Untested queens 75c; six \$4.25; 12, \$8.00; tested \$1.25; six \$7.00; 12, \$12.00. For select queens add 25c each to above prices. Breeding queens \$3.00 to \$5.00 each. For queens in larger quantities write for prices. ROBT. B. SPICER, Wharton, N. J.

FOR SALE—One 20 and one 87 $\frac{1}{2}$ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. Beebe, Mosinee, Wis., Route No. 1.

A student with some experience desires a position with some experienced apiarist during winter in the south. Florida, Cuba or Porto Rico, suggested. interested party address Winter, in care of The Bee-Keepers' Review, Northstar, Michigan, U. S. A.

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen..... .75
1 doz.....\$7.20
4 doz. or more.....50 cents each
J. H. HAUGHEY, Berrien Springs,
Mich.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. **PEARL CARD CO.**, Clintonville, Ct.

FOR SALE—100 second hand 8 and 9 frame hive bodies at 20c each. Write for description. **C. D. TOWNSEND**, Stockbridge, Mich.

WANT TO SEND YOU our catalogue and price list of behives and fixtures. They are nice and cheap. **WHITE MFG. CO.**, Greenville, Tex.

WANTED—S. C. B. Leghorns, Pullets and Cockrels and other varieties good for laying. **Breckel Brothers**, Lewis Ave., West Toledo, Ohio.

We have for sale at Plano, Ill. 100 lbs of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb., in 50 lb. lots or more. Address **The Bee-Keepers' Review**, Northstar, Mich.

BEEKEEPERS' SUPPLIES sold at a reduction. **Marshfield Sections** and **Falcon Foundation** in stock. Send for my prices free. **The Bee and Honey Man W. D. SOPER**, Jackson, Mich.

LABELS FOR HONEY—According to the interstate commerce ruling, honey put up for retail trade since September 3rd, **MUST** contain a net weight label. The little label shown here is one inch by two inches and is gummed all ready to stick to the section, or jar, as the case may be. The reading can be changed to suit each individual need without extra charge. The figures indicative of the number of ounces can be left blank, and the amount written in with a pen, if so desired. 2000, one by two inch, net weight, gummed Labels for only a dollar, postpaid. Address **The Bee-Keepers' Review**, Northstar, Michigan.

This Honey produced by

HOMER G. SMITH
Parkville, Mich.

It contains 14 ounces of **HONEY**
exclusive of wood.

Making a Market for Five Hundred Cars of Western Honey

(Continued from page 375)

either our locals or National as that we be united for definite things. When the organization is such that definite results are obtained, the membership will take care of itself. Our Constitution should be so drawn that we may carry on this work through the proper officers without hindrances affecting the success of the venture. This cooperative work must not interfere with the many other lines of work that lie within the province of this society, but should be an aid to them all. We must preserve the united spirit in all the work that we undertake.

Why Are We Not Better Organized?

This is a question all farmers, fruit growers, beemen and country folk are asking themselves. The country dweller deals with nature and the city dweller with men, the one has dealt with natural forces and the other with social forces. The farmer from his isolation has an independence that is both his strength and weakness; while the city man from close proximity to his fellows has become organized and has developed social strength and advantages superior to the country. That is why the cities are drawing the best of the country to themselves, because living is more livable in the city than in the country. And this will not change until the country is organized for betterment along manifold lines. The organized city now has the advantage of the unorganized country. This, in the face of the fact that the country has by far the greater advantages naturally for right living. And so we hear of the need for uplifting the farmer, and the farmer in his independence resents being uplifted—the farmer will not accept charity. He is perfectly capable of working his own uplift, in other words organizing himself for all lines of improvement. The indications are that organization for marketing is one of the first steps the country is taking. The farm is being recognized as a business enterprise without a sales organization. The factory has its selling organization and sets the price on its pro-

duct. You do not receive a letter from a manufacturing concern stating that they have one hundred hives on hand and asking you what you are paying for hives this year. That is the way the beekeeper writes to the honey buyer, however. The unorganized industry always will buy on the high market and sell on the low market, and will forever be at the mercy of the organized industry.

We cannot expect any improvement in the situation, so long as we depend upon the honey buyers and dealers to improve the situation for us. If the situation is improved it will be for their own benefit just as it will be for our own benefit if we ourselves improve conditions. If I buy a car of honey it is for my own profit and not to help out the producers raising the crop. Of course I am glad if the market is such that I can pay a good price and sell the same way, but my own interest comes first. I will not pay any more than I have to and neither will you or anyone else. Suppose you go to a commission man and say, now you are getting too much, 10 per cent is too much, you can afford to do the business for 5 per cent! You will now please reduce your commission, as I suggest! You know what he would say, and I know what I would say if I was in his place.

Dr. T. N. Carver told us at our Farmers' Congress in Colorado recently that while he was hardly ready to endorse the idea fully he would make it as a tentative proposition that those who were not capable of cooperating were the legitimate prey of those who can. That is a sound basis for us to work upon, our betterment is strictly up to us, we do not court or need any uplift from the outside.

We have no legitimate complaint against anyone or any conditions, if they are not satisfactory it is up to us to change them.

The present methods of distribution have not been sufficient, if they had been we would not find one city consuming large amounts of honey and another city scarcely any. The development of the market will be slow but there must be a beginning or we must remain content with conditions as they are. The present distributing agencies will not be

Reliable Poultry Journal and the Review, one year for only \$1.25

The Reliable Poultry Journal is one of the very best poultry journals published and regularly sells for 50 cents a year. If you keep poultry, we would recommend the Reliable as the very best Journal for you to take in connection with the Review. Both only \$1.25 for a whole year. Canadian postage 25 cents additional. Address The Bee-Keepers' Review, Northstar, Mich.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

Gather in the White Sweet Clover Seed

Those who have had experience tell us that it is wonderful how well white sweet clover yields seed. We were wondering if there were not many of our members who live in a locality where sweet clover seed can be harvested at a profit.

The very best seed is cut and thrashed by hand, then run through a fanning mill. This is the method that produces the unhulled variety, which is usually free from weed seed or foreign matter.

WHITE SWEET CLOVER SEED—We are getting in "touch" with several members who will harvest a considerable White Sweet Clover Seed this fall. Last season we could not get half enough of the unhulled white to supply our members. We would suggest that those wanting seed place their order early this fall, as we anticipate another season of heavy demand. You may send in \$15 per hundred pounds for the unhulled white variety, and if the price is more or less this can be adjusted at the time of shipment. Address The Beekeepers' Review, Northstar, Mich.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys this superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

Try our Classified Department and get results.

BOOKS ON PRACTICAL BEE CULTURE

Parcel Post—Include Postage as weight indicates

Post Paid—Where no weight is mentioned

A B C and X Y Z of Bee Culture, cloth.....	\$2.00	
A B C and X Y Z of Bee Culture, half leather....	2.40	
A B C and X Y Z of Bee Culture, German.....	2.50	3 lbs.
A B C de L'Apiculture French ed.....	2.00	
El A B C Y X Y Z de la Apicultura, Spanish....	2.00	
Langstroth on the Hive and Honey Bee Reprint.....	1.00	
Advanced Bee Culture, W. Z. Hutchinson.....	1.00	2 lbs.
Biggle Bee Book.....	.50	
British Bee-keepers' Guide-book, Cowan.....	1.00	1 lb.
Cook's Manual of the Apiary	1.15	2 lbs.
Doolittle's Queen-rearing..	.75	1 lb.
Fifty Years Among the Bees, C. C. Miller.....	1.00	2 lbs.
First Lessons in Bee-keeping	.50	
Honey-bee, The—Cowan..	1.00	1 lb.
How to Keep Bees — Mrs. Comstock.....	1.00	2 lbs.
Humble Bee, The—F. W. L. Sladen.....	3.25	
Irish Bee Guide, Rev. J. G. Digges.....	1.00	1 lb.
Langstroth, rev. by Dadant, cloth.....	1.25	2 lbs.
Modern Bee-farm, S. Simmins	2.00	2 lbs.
Practical Bee Guide.....	1.00	
Quimby's New Bee-keeping..	1.00	2 lbs.
Wax Craft.....	1.00	
Increase Forcing the Queen to Lay; each.....	.25	2c.
French edition, separate...	.50	2c.

POPULAR BOOKS ON BEE CULTURE

Bee People, The, Margaret M. Morley.....	\$1.50	2 lbs.
Children's Story of the Bee	2.00	
Honey Makers, The Margaret M. Morley.....	1.50	2 lbs.
Life of the Bee, Maeterlinck	1.40	2 lbs.
Bee Master of Warrilow, The —Edwards.....	.57	1 lb.
Lore of the Honey Bee.....	2.00	
Queenie.....	.75	
Bee Models.....each	50c;	2 for 75.
Ten-cent Library Booklets..	.10	
Gleanings Library.....		
.....50c each, 3 for \$1, 5 for \$1 50		

RURAL BOOKS

A B C of Carp Culture.....	\$0.30	1 lb.
A B C of Potato Culture, paper.....	.57	1 lb.
A B C of Potato Culture, cloth.....	.85	1 lb.
A B C of Strawberry Culture, paper.....	.50	1 lb.
A B C of Strawberry Culture, cloth.....	.75	1 lb.
Tomato Culture.....	.40	1 lb.
Tile Drainage, W. I. Chamberlain.....	.40	1 lb.
Maple Sugar and the sugar-bush, paper.....	.30	1 lb.
Winter Care of Horses and Cattle, paper.....	.30	1 lb.
How to Keep Well.....	1.00	
Our Farming.....	.75	
The Dollar Hen.....	1.00	
What to Do, paper.....	.50	
What to Do, cloth.....	.75	

Address All Orders

THE BEE-KEEPERS' REVIEW
Northstar, Michigan

put out of business or probably very few of them. If they can compete with this new kind of competition-COOPERATION, they will demonstrate their right to a place in the honey distributing agencies of the country.

Organization for selling a standardized product at a better price is a need, but organization for selling a poor product at a better price is an unworthy aim and if attempted will meet with failure. And so along with organization for selling must go organization for education to produce a standardized product. A standardized product simplifies selling and distributing to the minimum. Go into the districts of heavy commercial production in the west and you find all the honey producers using the same size section, shipping case and grading rules. Their methods of production are all alike or nearly so. The supplies in the main are all made by one manufacturer which is another advantage for uniformity. So when these producers bring their product together for loading a car it is all uniform. The product is a standardized product, and these districts always are sought out by the buyers for very obvious reasons.

Go into another district and you may find Standard two beeway sections, three beeway and four beeway sections, tall sections, of several different sizes, double tier cases, single tier cases and all of a size to take their respective size and style of section. And you will find different grading rules also. If you attempt to load a car of this kind of honey it is a proposition and is not the kind to suit the dealer for he hardly knows what he has got.

We must standardize our goods and to do so we have to conform to the methods of the majority. Of course if we are still independent enough to look after marketing our own honey we may get along; but the beekeeper who has gone on that principle in the west the past year has had his troubles. He could not compete with the better organized associations. Education for standardization is a perennial program for all beekeepers' organizations.

California has had her rains and things are looking encouraging for her beekeepers; the prospects

throughout the Inter-Mountain region are good—we have more bees than a year ago and snow in the mountains has been abundant. Each year sees some new irrigation districts coming into productiveness and others improved in water supply by the completion of storage reservoirs, making the crops more certain. The west on the whole produces a merchantable crop of honey every year so we are not interested so much in “more bees,” “better bees” or “more better bees” as we are in more and better markets to place what we already produce. For the small producer this marketing question will not seem so important; however some of our small producers have had their market all but destroyed by honey shipped in from a distance and sold for less than they should take for their product. It is for us to see that the markets are so developed that they will consume our increasing production.

This matter should not look difficult to us when we realize that individual beekeepers have gone into large cities and built up a fine outlet for their product hundreds of miles from the source of production. It is practical and if the right foundation is laid will pay from the beginning. One such center would be the radiating center for branches the whole country over. The right foundation is the standardization of our product through the organization and work of the local unit, brought about and directed by the organizers and the work of our National organ.

The methods used by the orange growers can probably be adapted to our use, though our problems are somewhat different. The methods of working out the problem need not be handled minutely, for they cannot till all the facts and information obtainable from other organizations that have succeeded are accessible for our use. The Rural Organization Service of The Department of Agriculture of which Dr. T. N. Carver is Director may be relied upon to furnish us with data and suggestions as to the best procedure for us to take.

In answering advertisements in the REVIEW, kindly say, I saw your advertisement in the BEE-KEEPERS' REVIEW.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

Advertise it in the REVIEW and get results.

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame, \$3.50; six two-frame, \$20.40; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

When sending in your renewal for the REVIEW, kindly ask your neighbor beekeeper to subscribe with you.

GET TOP NOTCH PRICES BY USING LEWIS SECTIONS AND SHIPPING CASES

Send for Annual Catalog which will tell you who is your nearest Distributer. G. B. Lewis Company, Watertown, Wis.

Plum City, Wis., Aug. 1st, 1914
The Beekeepers' Review:—Glad to see the yellow cover appear again. Hope it will continue.

This has been a rather poor year here. Cold and rainy, then it turned hot and dry. We had plenty of bees ready for work, but they just about held their own until July. Will get between 30 and 40 pounds of extracted honey per colony, spring count.

Yours very truly,
F. C. SMITH.

Ladies we need the cash!



59¢ for a \$1.50 Waist means 91¢ to YOU

10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 seller must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four. Your money refunded if not satisfied.

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Keep Pigeons

They Pay Dollars While Chickens pay Cents

The young 20 to 25 days old sell for 40 to 60 cents each (according to the season.) The City markets are always clamoring for them.

Each Pair of Pigeons will raise 18 to 22 young a year

They will clear you above all expenses, \$5.00 a year per pair. They breed the entire year. Twenty minutes daily will care for 100 pairs.

**Always penned up out of the way
Very small space required**

All this is fully explained in this month's issue of our Journal. Send for it; price 10 cts.

**Reliable Squab Journal
Versailles, Mo.**

Social Benefits of Cooperation

Cooperation encourages and demands higher standards in beekeeping practice, the members of any successful cooperative take on increased self-respect. With an improvement in the product comes a pride in the product. A neat little sermon might here be preached upon the effect of the quality of one's work upon character, but I will refrain, except to say that this pride in fine work is going to have an important influence in keeping the young people from leaving the country. It is a significant thing to see in the honey houses and shops of the western beemen; the beemen, their wives, sons and daughters, carefully cleaning and packing the honey in new shipping cases. The judging of the color and finish with the eye and carefully weighing the sections and cases stimulates self respect. It is a fine training for accuracy in all the work that follows. The better part of the worker's nature goes into the work. Here is what Ruskin said along this line, "It may be proved with much certainty, that God intends no man to live in this world without working; but it seems no less evident that he intends every man to be happy in his work. It was written "In the sweat of thy brow" but it was never written "In the breaking of thy heart." The breaking of the heart in agriculture has driven the young people away to the cities. The disorganization of the country is largely responsible for it. In the getting together and doing things joyfully there is life and happiness. In Germany they have a word the children especially use in their play, "Mittmachen." We have no word in English quite to equal it. But doing things together, teamwork, is what we need. Country life must be organized and the local, social, educational, cooperative beekeepers' association we hope will play its part in this most significant movement of our time.

Out in the Rockies lies a little valley twenty-five miles off the main line of a transcontinental railroad. In reaching this valley the

THE BEEWARE BRAND MEANS SUCCESS INSURANCE

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G. B. Lewis Company, Watertown, Wis.

road winds around mountains and over mesas until one wonders how the valley was ever found at all. Lying at an elevation of six to nine thousand feet it is blessed with abundant rains and mountain water for irrigation. The grass upon the mountain sides is hip high—it is the stockman's paradise—the forest reserves are all about, in fact the valley lies in a great reserve. The pasturage upon the range is to be had upon a small rental and each rancher may cut out for his own use more than fifteen thousand feet of lumber each year. Alfalfa thrives, for many thousands of tons are needed to feed the stock during the winter. Sweet clover grows luxuriantly all over the hills and waste places. Nearly every ranch has its apiary and honey house close to the rear of the dwelling house, presumably so the housewife may put up sections, or clean and pack honey when household duties do not need her attention. Last August it was my pleasure to look in upon the work being done in these honey houses, with the housewife presiding at the packing table preparing the honey for market. The children perhaps would be cleaning the honey or the emptied supers. Honey and cattle, I was told by rancher after rancher were their money crops. You see they had to produce crops that could be profitably taken twenty-five miles to the railroad. The homes in these valleys are of a higher standard than any district I have been in for a long time. Many had hot and cold water in their homes, nice ranges and kitchen cabinets were much in evidence. Beekeeping and honey production has been standardized, they cooperate in selling and buying. Apiary inspection is liberally supported, and while foul brood at one time destroyed hundreds of colonies, a case of disease is hard to find at the present time. Conditions such as these are keeping the brains in the country.

If bee-culture is to grow and expand or even hold its own the apiarist must be as prosperous as his neighbor of equal ability. His sons will not take up beekeeping

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

See California

and her two great Expositions
FOR ONE DOLLAR

California will hold next year two great universal Expositions, one at San Francisco and the other at San Diego, in celebration of the completion of the Panama Canal and the joining of the Atlantic and Pacific Oceans.

To supply the demand for reliable and authentic information on California and these two Expositions, we have published two guide books; one on San Francisco, the Exposition and Northern California; the other on Los Angeles, San Diego, the Exposition and Southern California, also a lithographed view of San Francisco in colors (size 30x45 inches) a picture of the rebuilt city, including the Exposition. Each book is 6x9 inches, contains 150 pages and beautiful illustrations.

These two books and view give a comprehensive, honest history and description of the State, her principal cities, resources and her two great Expositions. Sent postpaid for a one dollar bill, money order, draft or check. North American Press Association, 1453 Hearst Building, San Francisco.

Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now will fruit next summer. Grapes are Worden, Niagara, Iona, Concord, the best early medium and late varieties. **\$1.00**

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Just put your name
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On the latest, most modern, most sanitary cream separator built. Gearing runs in a constant bath of oil and all enclosed, dust and dirt proof. Closest skimming, new type disc bowl. A lot of New Sanitary features not found on other makes. One-half the price of the old style, cumbersome machines selling through agents and dealers. Buy direct from factory and save big money. Get my new Catalog. A postal brings it.

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Days
FREE
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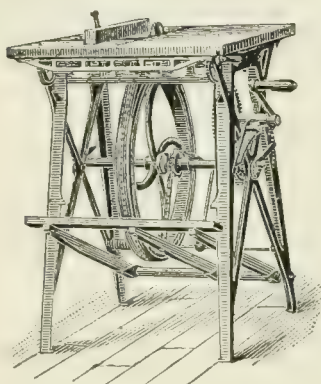
30 DISTRIBUTING HOUSES FOR LEWIS BEEWARE

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if they do not feel assured of as large an income as their classmates look forward to. The technical and professional schools would have few students if there was not a prospect of an income better than \$1000 a year; and we cannot expect to see bee-culture advance unless we can justly hold out to intelligent youth the prospect of the same or better. If we cannot they will go into other work and our wives will persuade us older ones to give up the bees and take up work more remunerative. As self-respecting citizens we owe it to

ourselves and our families to embellish our lives with culture and our homes with beauty, and we must have leisure enough to enjoy these things. The calling of bee-culture is a fascinating pursuit and naturally leads one to the appreciation of the beauties of nature and life in the country. Let us work hard for the organization of our work economically and socially so that these things may be ours.

In sending in your renewal, kindly ask your neighbor beekeeper to subscribe with you.



MAKE YOUR OWN HIVES

Bee-Keepers will save money by using our FOOT POWER

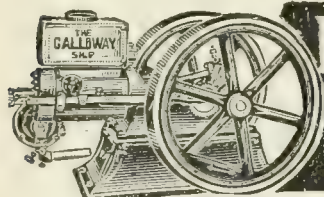
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in making their hives, sections and boxes. Machine on trial
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This Great 5HP Galloway
Stationary Engine-Only**

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Galloway Engines Are Made in Sizes from 1 3-4 to 15 H. P. Twenty-Four Different Models

Yes Sir! Try It 30 Days on Your Own Farm at My Risk

It's got to please you entirely or it won't cost you one cent. My guarantee is printed in black and white and says "Satisfaction or your money back" with all the freight charges paid. Galloway engines are high quality engines selling at the lowest price ever made. Five years ago when I came out with my engines, dealers were asking \$250 to \$300 for inferior 5 h. p. engines. I've made them come down in price, but today they can't anywhere near meet my new prices. Get my catalog and see the proof.

My Direct from Factory Plan Saves You \$50 to \$300

Just one small manufacturer's profit to pay over and above the actual cost of materials and labor. No jobber's, dealer's or agent's profit, no salesman's expenses or bad debts to pay on my plan. Over 35,000 Galloway engine users will tell you my plan paid them big. It will pay you. Get my catalog and see my new low prices and liberal terms. 1 3-4 h. p. engines at only \$26.75, 2 1-4 h. p. engines at \$39.50 and prices to match on all sizes from 1 3-4 h. p. to 15 h. p. either Stationary, Mounted or Wood Sawing Outfits. Twenty-four models to select from. Get my prices before you buy.

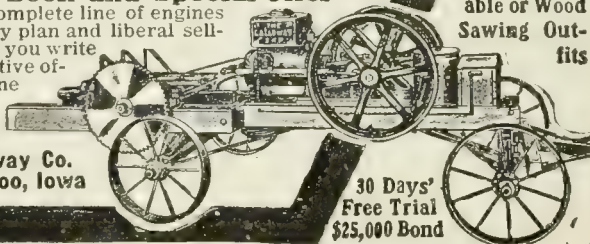
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ARE PERFECT IN ALL RESPECTS**

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G. B. Lewis Company, Watertown, Wis.

Why I Winter in the Cellar

(Continued from page 262)

use six inch tile from front corner of cellar to outlet 100 feet away if possible, this for ventilator as well as drain. I would also build brick chimney from cellar floor at back end to above roof, have this at least 2x2½ bricks in size, leaving a flue about 9x13 inches with opening at floor of cellar. If you build wall six feet from front end outside and fill in with earth the vestibule would not be needed. I would strongly advise that you do this, as your cellar would accommodate more bees and give better results. I would not have any windows in cellar. If you build wall out side of front end and fill in as recommended and do not have vestibule as shown in drawing then I would put a double door with air space in each (two thickness of matched lumber with air space between) at each end of alley through earth filling. This would be a big advantage since entrance is on north end and exposed. In building a bee cellar always remember that it is getting it entirely under ground that makes it most easy to control temperature as well as to avoid dampness.

The Goldenrod or White Cover---Which?

We copy a part of a letter from Vice President Pellett under date of Aug. 9th, as follows:

You recently asked through the Review for expressions concerning the cover. At Mt. Pleasant the matter was discussed among those present and nearly everybody seemed to prefer the white cover and the general appearance of the Magazine as it was in the spring numbers. Few seem to like the yellow and some dislike it seriously. If all your readers are like the Iowa fellows that I have heard express themselves the white cover will prove much more popular.

It costs the Review nearly a hundred dollars a year to finance the National. This should not be so. A fee sufficient to cover all regular expenses should be levied upon each member.

....The....

Canadian Horticulturist and Bee-Keeper

The Only Bee Publication in
Canada

It is the official organ of the Ontario Bee-Keepers' Association and has incorporated with it the former Canadian Bee Journal.

Bee-Keeping and Horticulture in its various branches are effectively combined to form a live, attractive, and practical monthly magazine.

Well illustrated and up-to-date.
Subscription price postpaid—

Canada—\$1.00 a year.
United States, \$1.25 a year.
Foreign, \$1.50 a year.

Sample Copy sent free on request.

The Horticultural Publish-
ing Co., Limited

Peterboro, Ont., Can.

Queens of Moore's Strain of Italians

PRODUCE WORKERS

With honey nice and quick.
That fill the supers quick.

They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc. Untested queens, \$1; six, \$5; 12, \$9. Select untested, \$1.25; six, \$6; 12 \$11. I now have 750 nuclei and am filling orders by return mail. Safe arrival and satisfaction guaranteed. Circular free.

J. P. MOORE,

Queen-breeder,

Route 1, Morgan, Ky.

BE A HARD BUYER

BUY YOUR COMB FOUNDATION THE CHEAPER WAY

THE CHEAPER WAY---Ship your Beeswax to Gus Dittmer Company and have it made into any grade of DITTMER FOUNDATION you need.

Write for information before you sell your Beeswax.

Beeswax taken in payment for making your wax into DITTMER COMB FOUNDATION.

Ask for the new 1914 catalogue

GUS DITTMER COMPANY

Augusta, Wisconsin

WE MAKE IT GOOD
THE BEES MAKE IT FAMOUS

The Reputation of

DADANT'S FOUNDATION

Has been built on its merit

It is a Favorite with Beekeepers

BECAUSE

It is so well liked by the BEES

Whether it's a pound or whether it's a ton, every sheet is PERFECT

Satisfaction Guaranteed in Every Way

TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 In 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can ..	\$2.25	\$2.15	\$20.00	
2½ lb. Can ..	2.75	2.60	24.00	
3 lb. Can ..	3.00	2.85	28.00	
5 lb. Pail \$5.	4.75	4.50	42.50	
10 lb. Pail 7.	6.50	6.25	60.00	

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS, 2¼ INCH SCREW

1 in a case, price.....	.32 per case
2 in a case, price.....	.60 per case
2 in a case in lots of 250 cases, price.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases price.....	\$58 50 per 100 cases
50 in a crate, price.....	\$10.00 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.	

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @ .....	.60c per case
10 in a wooden re-shipping case @ .....	.95c per case
50 in one large crate.....	\$3.50 per crate

IN CORRUGATED PAPER MAILING CASE

The most successful mailing case ever introduced @ \$11.00 per 100

The above mailing case holds nearly 12 lbs. of honey and when packed for mailing weighs 14 lbs. with a fragile tag attached, no breakage has been reported out of many hundreds in use.

Anything in the line of Tin containers can be furnished at corresponding prices.

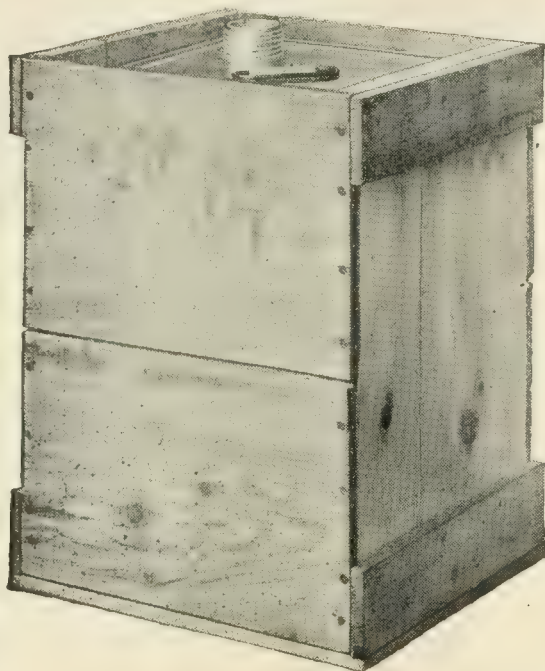
One percent discount to National Members, cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

Address

The National Bee-Keepers' Association
NORTHSTAR, MICHIGAN

PROTECT YOUR PRODUCT--USE "NATIONAL" HONEY CANS AND FRICTION TOP PACKAGES

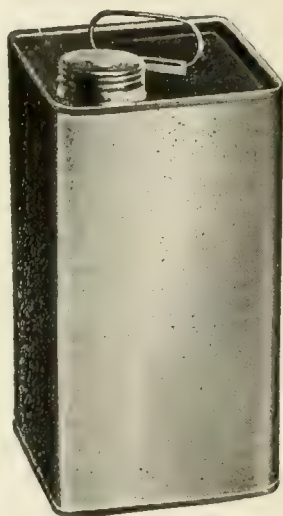
We furnish shipping cases with cleated ends insuring a package of unusual strength for your product



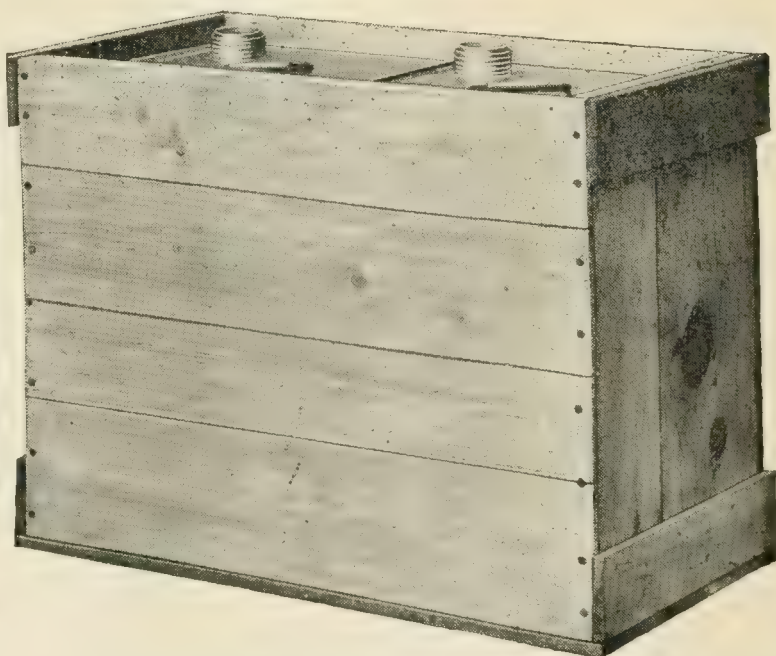
5-gal. --Square--Round Corner--Cased Singly



1-gal. Oblong Paneled Honey Can



1-gal. Sqr. Rd. Cor.
with 1 3-4 in. screw



5-gal. Square--Round Corner--Cased in Pairs

— Mail your order for prompt shipment at current prices or write for price list. —

NATIONAL CAN COMPANY---INDEPENDENT MANUFACTURERS
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ROUND
SQUARE
CRATED
OR
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SQUARE
1 gallon, 100 to
crate \$7.25 per 100

60-POUND ROUND JACKETED 3-INCH SCREW

Price in lots of 25 39 cents each

Price in lots of 100 36½ cents each

Price in lots of 250 36 cents each

SPENCER FRICTION TOP CANS PATENTED



Approx Capacity	Per 100 In 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	..	\$2.25	\$2.15	\$20.00
2½ lb. Can	..	2.75	2.60	24.00
3 lb. Can	..	3.00	2.85	28.00
5 lb. Pail	\$5.	4.75	4.50	42.50
10 lb. Pail	7.	6.50	6.25	60.00

60-POUND SQUARE

One in a case, Price 32c per case

Two in a case, Price 60c per case

Special prices quoted for carload quantities

American Can Co.

New York Chicago
147 West 14th St. Monroe Bldg.

Gleanings in Bee Culture

== FOR 1914 ==

The Magazine for the Beginner, Back-lotter, and Specialist Beekeeper

For several years we have been doing our best to make GLEANINGS an indispensable publication for the wide-awake bee-keeper whether he has but one colony, a small suburban apiary or a series of out-apiaries numbering hundreds of colonies in all. We believe we have never received such enthusiastic approval of our efforts as we received in 1913 when hundreds of letters from our friends told of their appreciation. We wish that we might print a number of them here, but we prefer to utilize the rest of the space for outlining our plans for 1914.

For 1914 we shall continue the special numbers, the feature which has so delighted our readers during the last three years. In deciding just what subjects to take up, we have not selected topics at random, for we have been guided by the expression of the majority.

JANUARY 1—BEES AND POULTRY

We think we are safe in saying that no special number that we ever published proved so popular as our February 15th issue for 1912. In getting out another special number devoted to the interests of poultry-raising and beekeeping, we propose to surpass our former efforts and to get together the best material possible on poultry-raising from the beekeepers' standpoint.

FEBRUARY 1—BEES AND FRUIT—

Our March 15th issue for 1912 has been used far and wide by beekeepers and fruit-growers alike to show the value of bees in large orchards. In the two years that have elapsed, however, so much new material has developed that in order to be entirely up to date it is really necessary to have another special number on the same subject. We have a wealth of material that has never before been given the public. Extensive fruit-growers who are not especially interested in honey-production will tell of the value of bees in orchards.

MARCH 1—BEEKEEPING IN CITIES—

Probably few beekeepers realize the number of beekeepers there are in every large city. City beekeeping is a most interesting topic, and in addition to stories of beekeeping told by professional men we shall have discussed various problems connected with bees in attics, on roofs, and in back lots. We also have a true story of a beekeeper in a city who was fined \$100.00 because his bees were considered a nuisance and who afterward appealed to a higher court and won out. Good story.

APRIL 1—BREEDING—Ever since we first began having special numbers there have been requests on the part of a good many of our readers for a special number on breeding. We are glad that we are able to arrange for it this year, for it is a fact that very little is known in regard to breeding bees. Breeding is one of the most important subjects connected with our

pursuit. We shall publish special articles by noted queen-breeders on qualifications of breeding queens. Queen-rearing both for the small beekeeper and the specialist will be fully discussed.

JUNE 1—MOVING BEES—We ourselves expect to move three hundred colonies of bees to Florida, get a good honey crop, double the number of colonies and move them back again in the spring. Details of moving by boat, wagon, autotruck, and by rail will be fully described and illustrated, and other large beekeepers having experience along this line have also promised articles for this number.

AUGUST 1—CROP AND MARKET REPORTS—There has never yet been a systematic effort put forth for the compiling and publishing of comprehensive crop and market reports from various parts of the country. In 1914 we are going to make the effort of our lives to get telegraph reports from important fields, such as the clover-belt, Texas, Colorado, Idaho and California, etc. These will be published right along as soon as we can get them, but in this August 1st issue we shall have a grand summary of the crop reports and conditions of the market in general. No beekeeper should miss this important number.

SEPTEMBER 1 — WINTERING—We have not yet learned all there is to be learned in regard to wintering. A number of specialists are going to make experiments during the winter of 1913-14 which experiments will be published in this number. We shall also give our own experience summed up as to feasibility of wintering northern apiaries in the South.

IS NOT ALL THIS WORTH WHILE?

We have now given you our plan for 1914. If you are trying to make the most out of your bees we feel sure you cannot afford to miss such a wealth of information as the subscription price, \$1.00 will bring you.

The A. I. Root Company, Medina, Ohio

The Beekeepers' Review

Published Monthly



NOV.
1914



NORTHSTAR,
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ONE DOLLAR PER YEAR

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SHIPPING CASES, EXTRACT-
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THING FOR THE BEE-
KEEPER

Send us a list of your require-
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us quote you our very best fac-
tory prices.

"Falcon" supplies are made
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Send for our Red catalog,
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All goods guaranteed. A trial
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Where the Good Bee-Hives
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Are made right in the timber
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RECT, QUICK and LOW
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Sections are made of the best
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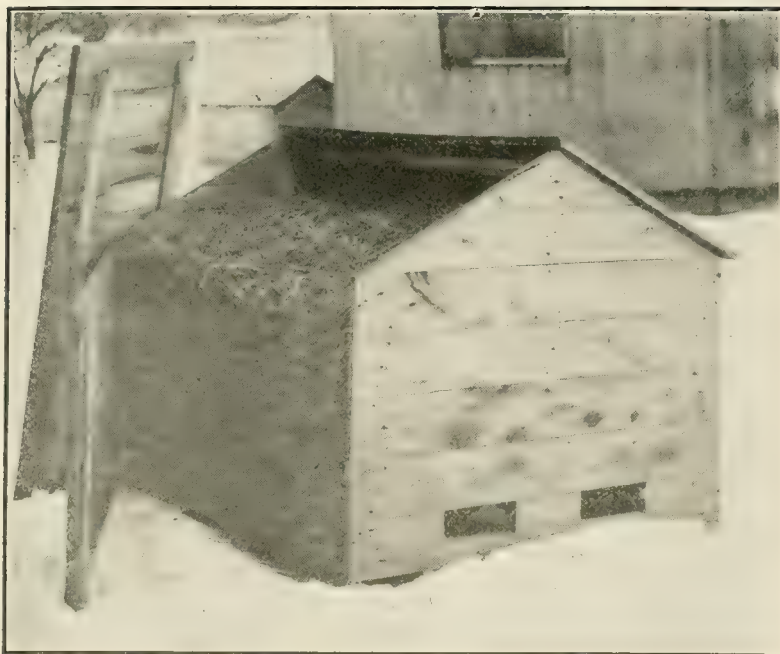
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Outyard of Ira D. Bartlet, East Jordan, Michigan. A nicely arranged, well protected apiary that winters successfully. They are packed for winter in four colony crses similar to the one above.

The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

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Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordele, Ga.

Second Year's Work in New Field

Our second year's work in the new field was more successful than the first one, because we had mastered more of the conditions existing there, viz., the sources of nectar, duration of honey flow, dates of beginning, ending, etc., also the sources of pollen. A close record was kept of all this for future reference as well as the results of the previous year from which we were largely directing our work.

The one story hives prepared for the increase were scattered around at the nine yards, also one super for every hive, one super for each colony of the increase, everything being in readiness.

The first great pollen plant began to bloom the last week in January and the last week in February

I wrote my man in charge to start his first round for the season but not to work in the apiaries during cold days when the bees were not flying freely. I told him to make a brief record of each colony in each yard and if he found any colonies with less than one frame of honey in it to give it another frame of honey from some colony heavy in stores. A record was to be made of the frames in each colony also regarding the size of the cluster of bees in smaller colonies, how many frames of comb were empty or full in each colony, also how many frames contained brood.

Well the record showed that there was considerable honey which would naturally be the case after such a heavy late honey flow

the previous season. I instructed him to start on his second round March the 15th and work about as follows: Colonies with less than a quart of bees and no brood were set on strongest. Colonies with a quart of bees or more and no brood were given a frame of young brood and eggs from strongest colonies, and if the same sized colonies had brood they were given a frame of the nearest sealed brood from strongest colonies. The empty combs were inserted in the middle of the brood nest in the strongest and the frames of brood in middle of weaker colonies. Any, light in stores, were given a frame of honey as during first round.

I looked over my previous season's record and saw that the supply of pollen would be barely enough and that there would be just a little nectar up to April the 10th or 15th at which time the main honey flow would start slowly. I

wrote my man to start on the first of April and go to three yards each day for three successive days and divide four of the strongest colonies in each yard into two equal parts to be sure to put the queen in the part carried to new stand. If he failed to find queen in one, take another, etc. He wrote me the day he started and eight days afterwards I took the train with a good supply of queen cell protectors, leaving my helpers at home in charge until my return with full instructions how to proceed with the work. On the morning of the 9th day I was at my new field and ready for work and by night my helpers and I had made all the desired increase at three yards in the usual manner and by next night all in three more and by next night the task was accomplished. Business was urgent at home but I could spare one more day and on

(Continued on page 430)

Crop Report--Honey

Department of Agriculture, Washington, D. C.

The results of the first inquiry of the Bureau of Crop Estimates on honey production are presented in Table 8. The figures given are based upon estimates received from the bureau's regular corps of correspondents and from a large special list of beekeepers. The number and character of the reports received, insure that the figures given fairly reflect the relative yield per colony this year and last, with the one exception that the fall flow this autumn may increase somewhat the yields for 1914. The returns were particularly full and adequate from all of the important honey-producing sections.

The yield is based on the total honey surplus (removed or to be removed from the hive) divided by the number of colonies remaining at the close of last winter.

The honey yield in the white clover belt of the central northern states has been very disappointing, especially when compared with the abundant yield last year and also with the unusually bright prospects early in the present year. Through many portions of this belt the crop failed entirely. The yields in the more northern states,

where the dependence upon white clover is not so great, were fair, though generally somewhat under those of last year.

The yields in the important honey-producing regions of southern California and southern Texas were good. The alfalfa yield in Colorado and Utah was fair, though not equal to last year. The South Atlantic and east Gulf States have yields about the same as last year—near an average crop.

An interesting fact, developed by this inquiry, is that the proportion of comb and "chunk" honey is decreasing and that the extracted is increasing. Testimony from the producers of beekeepers' supplies is corroborative of this finding.

The practical failure of honey production in much of the white clover belt should put beekeepers there on the alert to supplement the bees' scanty fall stores with sirup to prevent winter loss from starvation, unless the fall flow should prove unexpectedly abundant. Though the cost of sugar is high, a good colony of bees is worth much more than the cost of furnishing full stores for the winter.

A special report from Porto Rico \$100,000 during the past six years. A shows continued large increases in good strong colony in Porto Rico is the number of colonies of bees in expected to produce about 300 pounds that island, which fact is reflected in the honey a year, the nectar flow, the phenomenal increase in export of largely from flowering trees, being honey and beeswax, the value of which practically continuous throughout the has increased from about \$5,000 to year.

—Honey—Yield per colony and proportion of crop in comb, extract, and chunk, 1914 with comparisons.

State	Yield per colony.		Form of honey produced					
			Proportions in 1914			Proportions in 1909		
	1914	1913	Comb	Ex't	Chunk	Comb	Ex't	Chunk
	Lbs.	Lbs.	Per Ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Maine.....	45	38	80	15	5	80	20	0
New Hampshire.....	27	27						
Vermont.....	39	33	65.9	28.1	6	70	28.8	1.2
Massachusetts.....	25	31	66.9	32.4	0.7	86	12	2
Rhode Island.....	40	45	5	95	0	10	90	0
Connecticut.....	28	35	48	47	5	58	33	9
New York.....	20	37	47	50	3	60	38	3
New Jersey.....	10	40	25	75	0	65	35	0
Pennsylvania.....	35	45	65	29	6	74	21	5
Delaware.....	15	21						
Maryland.....	30	40	69	22	9	90	10	0
Virginia.....	30	38	87	12	1	93	7	0
West Virginia.....	25	20	57	38	5			
North Carolina.....	35	25	45	25	25	43	21	36
South Carolina.....	25	25						
Georgia.....	30	30	28	33	39	54	15	31
Florida.....	42	50	11	88	1	15	84	1
Ohio.....	17	50	66	32	2	68	29	3
Indiana.....	14	60	52	36	12	62	25	13
Illinois.....	12	60	42	56	2	53	46	1
Michigan.....	37	50	56	43	1	69	30	1
Wisconsin.....	45	60	41	58	1	28	71	1
Minnesota.....	35	60	36	63	1	52	48	0
Iowa.....	20	65	56	42	2	65	34	1
Missouri.....	5	30	32	38	30	41	35	24
North Dakota.....	20	50	77	22	1	65	30	5
South Dakota.....	30	50	43	42	15	61	38	1
Nebraska.....	25	25	67	28	5	78	19	3
Kansas.....	8	40	49	33	18	50	27	23
Kentucky.....								
Tennessee.....	30	30	31	23	46	26	19	55
Alabama.....	32	35	34	41	25	39	32	29
Mississippi.....	31	35	49	26	25	43	27	30
Louisiana.....	40	35	0	100	0			
Texas.....	55	35	4	51	45	1	40	59
Oklahoma.....	25	35	36	17	47	40	15	45
Arkansas.....	15	30	25	15	60	15	5	80
Montana.....	30	35						
Wyoming.....	75	75	92	8	0	5	95	0
Colorado.....	40	60	67	30	3	70	28	2
New Mexico.....	85	50	31	61	8	37	61	2
Arizona.....	63	70	6	94	0	10	90	0
Utah.....	65	70	17	83	0	0	100	0
Nevada.....	50	75						
Idaho.....	50	55	47	51	2	67	30	3
Washington.....	55	45	46	54	0	59	41	0
Oregon.....	45	40	64	34	2	52	38	4
California.....	75	36	18	79	3	20	79	1
United States.....	31.6	40.6	41.7	42.1	16.2	46.5	34.9	18.6

The Feeding of Sugar to Bees

By S. D. CHAPMAN, Mancelona, Mich.

Given at the Northern Michigan Convention, Petoskey, Michigan March 1914

(Continued from October Number)
 thing. We could not risk several thousand dollars we have invested in bees and supplies and above all our honor and reputation. He well knows he could not adulterate honey without being found out. He well knows his reputation as a citizen, his reputation as a beekeeper is ruined forever.

Yet certain members of this association are not only accused of feeding sugar to their bees but they have fed a large amount of sugar to their honey and sold this compound as honey. How do these stories get started?

They start from feeding sugar to their bees. When one of our large beekeepers drives to town and puts on for a load about one ton of granulated sugar and he does it in broad daylight, a part of the public become suspicious. They seem to think that man has got an awful big family or else there is a very close relationship existing between that load of sugar and his honey crop. It would be my advice to those beekeepers that are feeding so much sugar, to order your sugar from some large mail order house and have it shipped through as quietly as possible and bring it home after sundown. When these stories start the beekeeper does not know what is going on. Everything is said to his back, no one comes to him and informs him of these stories that are in circulation.

But these stories travel. In a few months they have gone for miles in every direction till the whole country is thoroughly permeated with these stories. In the light of beekeeping we can only compare such a locality to a colony of bees that has foulbrood in its last stages. It has not only destroyed the reputation of that beekeeper for ever in that locality but it has about ruined the local trade for honey. Let me give you some facts in the case. If one of us should go into such a locality to sell extracted honey, probably the

first man you offer honey to, will ask you, "How much sugar do you put in your honey?" He will say "I suppose about the same as such a one puts in his?" If the prospective purchaser is a lady she will exclaim, "O! we have plenty of sugar in the house!" After there has been several such questions fired at you you will feel small enough to go through a rat hole. You will feel like asking, what kind of a nefarious business are we in any way?

You have heard the story of manufactured comb honey. It started years ago but it is in the best of health today. When these stories once get started they will never down. They live till you and I are gone, and probably the newspapers will keep it going for another generation.

I believe it is the duty of every member of this association to choose several honest men in different parts of the locality where you sell honey and ask them if they have heard any stories that are detrimental to our profession and to keep you posted in the future. Some of the members of this association will get their eyes open.

Forty years ago last October I purchased my first bees. At that time we knew nothing about feeders though we were all running for comb honey at that time. Today if you read the Bee Journals and sum up the articles written by different correspondents throughout the land, you will come to the conclusion that the sugar barrel is about as necessary as the honey flow itself. If we keep on in the future as we have in the past, it will be but a short time till feeders and feeding will stand first, while the production of honey will be a very poor second.

Here in northern Michigan we only get fall honey one year in three. Is it profitable to extract all the honey from the upper stories and then feed our colonies from August first till the first of June?

If it is a paying proposition,—a great boon to the beekeeper—that it will conserve the reputation of the beekeeper as well as that of

our product. I would suggest that the motto on the Bee-Keepers' Review that reads "Keep More Bees" be changed to read "Feed More Sugar."

Field Notes From Iowa

By J. W. STINE, Salem, Deputy Inspector for Iowa

The warm weather and great amount of rainfall we have had this fall has made the fall-flow of honey very good and most colonies are strong in bees and have an abundance of good winter stores. The white clover and dandelions were in blossom in many places and the bees worked on the dandelions very much like in the spring of the year but not enough white clover was in bloom for the bees to gather from it.

On account of our moving from Salem and getting located in our new home in Stockport we did not have time to send in notes for October. In and around this town is a fine location for bees. One man in the town who had a few colonies (nine I believe), sold more honey than was sold by all the beekeepers in and near Salem. It was nearly all from the fall flowers. There are a number of quite extensive and progressive beekeepers in this county. We hope to have several beekeepers from this part of the state attend our state convention at Ames in November. Do not forget the dates, November 17, 18 and 19.

mer on "The Bee" by Walt Mason.

"The busy little bee is called a model, by some bores, for it has never loafed or stalled while doing up its chores. It scoots around in frantic haste, and bumbles as it flies; it lets no moment go to waste and that we know is wise. And as from flower to flower it bolts, unless you stand aside it sends about a million volts of lightning through your hide. Now industry is bully goods, but it should seasoned be, e'en in your most impatient moods, with tact and courtesy. Because the bee has lots of biz, it has no moral right to make its red hot stinger whiz into me out of sight. The bee's no model for the gent who'd do the proper thing, for he, though on his business bent, will not by-standers sting; he captivates by winning ways, the ancient and the young, and, as he stings no other jays he'll not by them be stung. The bee is always out for scraps, its head is always sore, it shoots its venom into chaps it never saw before; and e'en the ladies and the kids it stings as home it flees, and so we ought to put the lids upon the bumble bees.

I was handed this article last sum-

October 7, 1914.

EDITORIAL CORNER

KEEP YOUR OWN MIND.

We have seen a State Association kept out of the folds of the National for years by a few oily speakers who for some reason do not think well of the Association. In our correspondence with many beekeepers of that particular state, we find the producer is with us, but for some untold reason they allow the influence of those few

to dominate them at their meetings, thus keeping the association from affiliating with the National. We are wondering how long those producers are going to stand for this kind of procedure. You cannot help letting those fellows talk, it is a part of their being, but you CAN VOTE TO YOUR OWN INTEREST, DO IT AT YOUR NEXT MEETING.

MAETERLINK AS A HARVEST HAND.

Word has come to this country, by way of London Times, that Maurice Maeterlink, Belgium's charming poet, who sings so beautifully of the "honey-sweet hive and its humming inhabitants," has become a farm hand! Think of it! He says that he is fifty years old, too old to be accepted on the fighting corps, and as the crops needed attention—harvesting and threshing—he felt he must do something to aid his beleaguered country. So forth he fared to do yeoman service as a field worker. Overcome by the horror of the war, he says that he can not write of it. He says, "I have tried to write, but I find it impossible. I began a series of articles on the war, but nothing has come of the effort. I feel so restless all the time." He added: "The waste of it! To think, that after men have battled so successfully against disease and natural forces, they should fall themselves before this welter of carnage!" Even now, as a relief from the carnage of war, we feel sure his mind must turn as never before, with deep longing to the quiet, peaceful hum of the bees amid the heather—if indeed there be any heather or bees remaining intact, in that oppressed land, that is being so ruthlessly trampled under the gory heel of the God of War.—E. G. B.

THE POLICY OF THE BEE-KEEPERS' REVIEW DURING 1915.

At the National Delegate meeting in St. Louis last February, the policy of the National relative to furnishing members with their beekeeping supplies was fully discussed. If the reader will refer to the proposed change in the Constitution of the National Association published on another page, it will be noticed that those favoring the buying supplies for the members were in the majority, for, there is a clause to that effect included in said proposed change. Likely two-thirds of the delegates present favored the National buying beekeepers' supplies for the members, while the other third did not relish the idea a little bit. Knowing that the majority of the delegates favored furnishing the members with their supplies at the best advantage possible, why did not the Association take hold to this branch of the work and push it! Think it is

very easily explained, it was in deference of the minority.

The writer is heartily in support of helping the members in every way possible, both in buying their supplies at wholesale and, also in furnishing them with the best of reading procurable for the pages of the REVIEW, in fact, EVERY WAY POSSIBLE consistent with what we have to do with. Under the circumstances, it seems to the writer that this is the only practical way of managing the National, the wants of the members varying as they do, is to furnish something for all. Some members think that the literary feature is all there ought to be included in the National, others care nothing about only the sale of their honey, or the buying of their supplies at a close price. Others want to buy honey, and there you are!

"LAZY MAN'S WAY" OF TRANSFERRING.

In the same letter as the above, Mr. Croxen asks for a good, effective and safe way to transfer bees, from old combs in a mass, crooked, etc. He fears "getting honey all around, inducing robbing and killing bees" by the usual methods. Well, the past summer we tried what we call "Lazy Man's Way" of transferring. It is or may not be new, in all points; in fact, we are sure some of the features have been indicated before, by other bee men. Some features, also, we believe are new. Anyhow, as a total, here is the method: We first turned the old hive upside down, and drove out the bees, as in the usual methods of transferring; then set this swarm aside, in the box into which we had driven them.

Then we set our new, modern hive (with frames of comb), we would have used foundation, had we not had the combs on the old stand of the box hive. We then placed a queen-excluding honey board over the new hive, and on it set the old box hive (either side up, preferably right side up), right over the honey board on our modern hive. No need to make a close joint, unless there is an absolute dearth of honey; just wrap, if need be, an old burlap sack about the joint, and cover any exposed portion of tool of new hive with a board. Then shake your driven swarm out before the new hive, on old stand, and watch them run in! In three weeks we went to the hive, took off the old hive, and found every cell

of brood hatched, not one remaining unhatched. We then drove out the bees again from the old box hive, leaving nothing but the combs, and part of the honey; the bees we shook again into the new hive, or before the entrance. Then we did what we pleased with the old combs, either feeding the honey back, in a super, or extracting the combs, if the honey was good quality. The beauty of this method is that it can be done with two visits, and the bees not be seen in the time between the two visits; it can be applied admirably to out-yards, where visits are seldom. And also it is safe from robbers, as the swarm will always protect its brood in the old hive above the new hive; and finally, there is no danger from the brood in old hive chilling, as sometimes happens if night are cool, and brood not hatching rapidly. This transfer can be done at any time, in perfect safety and in short time. We would recommend it to Mr. Croxen if he still cares to try it, for he can do any cutting of combs in a tight room away from the bees. The old combs are best used for wax, anyhow, nine times out of ten. In these days of foundation it is poor policy, I am convinced, to fool much with patching old combs, as a rule, into frames and trying to make ourselves believe that we are satisfied! How many times, after doing this, have I come across some old frame so treated, and every time I saw it, it was an eye sore to me!—E. G. B.

WHITE GRUBS LIKELY TO CAUSE UNTOLD LOSSES.

The destructive May beetles, or so called June bug, as was previously predicted by the U. S. Department of Agriculture, were extremely abundant the past spring in northeastern Iowa, southern Wisconsin, and northern Illinois, parts of Minnesota, the southern part of Michigan and northern Ohio; also in northeastern Pennsylvania, southeastern New York, parts of Connecticut and New Jersey.

This is indicative of a great abundance of white grubs in 1915, and judging from the greater abundance of beetles in most of those sections this spring than three years ago, the grub injury will be even greater than in 1912 when it caused many millions of dollars damage.

Grains most likely to be attacked are: corn, timothy, potatoes, strawberries, etc. Those most likely not to be attacked are: buckwheat, clover, vetch, etc.

It will be noticed that the old friend, the clover, also buckwheat, are immune to the attack of the white grub.

Beekeepers will do well to make this clear among their neighbors to sow clover instead of timothy, thus helping oneself as well as the neighbor.

As a matter of precaution, it would be a good idea to carry out this scheme, even if one is not at present in the danger zone, for one cannot tell when the white grub may put in its appearance in other locations.

Every beekeeper should write immediately, before it is forgotten, to U. S. Department of Agriculture, Washington, D. C., for Bulletin No. 543 if you wish to learn more about this white grub.

NIGHT WORKING BEES WANTED.

A few weeks ago we received a letter from Mr. J. G. Lewis, of Big Pine Key, Marathon, Fla., in which he says, among other things: "Why don't you people get the government to procure a swarm of those night-working bees they have on the island of Mindanow, P. I.? I believe they would be of special value to Florida, as we have lots of night-blooming plants. I know that some members of the Philippine Government, when I was there, made a very favorable report on these bees."

We at once wrote to Mr. Phillips, of Washington, and in reply, he assures us that the bees referred to by our correspondent are no more than the giant bee (*Apis Dorsata*) of India, or a species of that bee. He says that among other things reported of them, they are said to work at night, etc., but have not been thought worth anything for this particular trait, even if they possess it. It appears to be another item added to corroborate what Mr. E. R. Root says of this bee, on page 80, A. B. C. and X. Y. Z. of Bee Keeping: "Much truth and nonsense have evidently been circulated about them." As Mr. Lewis was for some time in the Philippine Islands, we shall be glad to have him give us any further facts he has in regard to these bees. Mr. Benton (pg. A. B. C. quoted) says these are perhaps *Apis Zonata*, instead of *Dorsata*.—E. G. B.

Speaking of night blooming plants, makes me think of what Mr. Lewis stated above; but we do not think Florida has any more night blooming plants than most other states. As I came into my house tonight, I was arrested by the delightful odor of our night blooming jessamine; its delicate aroma can be scented only at night, as all lovers of this modest shrub well know. But it is never in sufficient quantities, we believe, to be of any value as a honey plant even if there were bees that gathered nectar during the night hours. Nor do we believe there are any blossoms of any importance that bloom at night, that do not also bloom in the day; so that there would be no advantage in having a bee that would work night as well as day. The nectar, secreted during the hours of the night, we believe, is deposited at the base of the stamens and pistils, or at base of corolla, and is *not* evaporative; so that the bees secure all the nectar of the night in their first visits of the early morning hours.—E. G. B.

We have been much interested in the "Arizona bee shed" of the current number of Gleanings. It is much like our Florida bee sheds, on the east coast, except that we use palmetto leaves to make the shade; and these are laid on and nailed, not wired on. But the appearance is much like that described by Mr. W. H. McCormick.—E. G. B.

IRON WEED AS A HONEY PRODUCER IN TEXAS.

F. C. Croxen, writing from El Campo, Texas, says: "There are acres and acres of laid out rice fields here, that are covered with iron weed, which will soon give a splendid honey flow. I took first premium at our county fair last fall with iron weed honey, and the blossom has a long season." Can you tell us whether or not, friend Croxen, the iron weed you speak of, is the same as that which covers the old orchards and lanes and back lots, abandoned or fallow fields, etc., all over Illinois and Indiana? Can you send us the botanical name? What is the color, flavor and body (thick or thin) of your iron weed honey? Are you sure it is from that source, alone, or largely? How do you know it, if so? We shall be glad to have any others, that know about iron weed honey, give the readers of the Review their verdict and data, if they will.--

E. G. B.

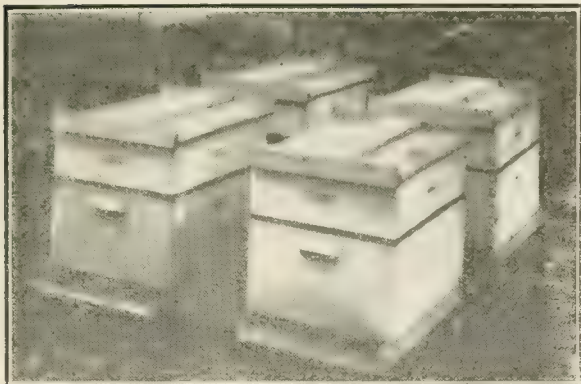
THE FOUR COLONY DOGHOUSE WINTER CASE.

The four colony winter case as we make it is explained so well by the accompanying cuts that further description is hardly necessary. The base or floor is used the year round, in summer for a stand and in winter for the bottom of the packing case.

The sides and ends, as well as each side of the roof is built separate. When the case is taken away in spring, it is knocked down, as it is only tacked together at each corner when in use. The opening for the entrance for the bees is cut 3 inches by eight inches, but in the 96 cases we are building this fall, no opening is cut, except we bore three or four $\frac{3}{8}$ -inch auger holes instead. This will form a vestibule of better protection from snow blizzards, that are likely to sift into the hives during winter. The tube for egress and ingress of the bees is explained so well no further explanation is necessary, only to say it is 3 inches high and 8 inches long, inside. Hereafter they will not be quite so deep. Their position on the hive is also shown by the accompanying cut. As we use 5 inches of packing all around our hives, of course this tube would be 5 inches wide from the inside of the case to the outside of the hive being packed.

The case proper, telescopes over the floor $\frac{3}{4}$ of an inch when set up. This prevents water oozing in under the bottom. Some of our covers are built of planed and matched lumber, running up and down the roof, others of galvanized steel and some of asphalt roofing. The inside demensions of the case for the 10-frame hive are 42 inches by 50 inches, being 10 inches wider than two hives and 10 inches longer than two hives, when placed close together.

The depth of the case is 10 inches more than the height of the hive to be packed, as we like 8 inches of packing on top with 2-inch space between cover and packing to allow the packing to dry out. This last measurement is for our flat top cases, which predominate. For packing we do not see much difference between clover chaff, fine straw or chaff of the wheat or oat variety. Some use sawdust or forest leaves with equally as good results. Quality of winter stores being more essential than kind or quantity of packing.



Groups of hives placed, one on each corner of platform, as used in summer.



Group of Hives placed in center of platform, allowing for 5" packing when winter case is placed around them.



Entrance Block. Not shown very plain in cut. It is made of a piece of lumber $\frac{7}{8}$ " square and $14\frac{1}{4}$ " long, with a winter entrance cut in one side at the center, $\frac{3}{8}$ " deep and 5" long. The peculiar arrangement is, that the entrance is used the other side up than regular. In other words, the entrance is up from the bottom of the hive a half inch, consequently, never clogs up with bees in winter.

Editor Review:—Is there any market for BITTER honey? Our beekeepers in W. Tenn. are troubled every year with a weed that yields bitter nectar. One man writes me that he has several thousand pounds and wants to find a market for it. Can send a sample if desired.

Very truly,

J. S. WARD.

(Answer—We never knew of a sample of honey so off in flavor that it could not be used for baking purposes. Then there are tobaccoists and manufacturers who use low grades of honey where the flavor does not count. Bakers only use a small per cent of their sweetening of honey, the greater share being a low grade of syrups of sugar, just enough honey being used to retain the moisture, so their Jumbles and such will not dry up and be unsaleable. The thing for your western Tenn. producers to do who have this off grade honey, is to look up their near-by bakers and tobaccoists and they will have no trouble in finding a customer, although the price for this grade of honey this particular year is not as remunerative as usual.—Ed.)

Akron, N. Y., Sept. 21, 1914.

EDITOR REVIEW:

I have just finished reading the last REVIEW and notice Dr. Bonney trying to roast me on my "Eat More Honey" idea. Now, Doctor, I think you will agree with me as well as others that honey should be pushed locally, and does "Keep more Bees" tend to incite the producer to do it, I think not. Let every producer make it a slogan to have his locality Eat More Honey and if he has something to remind him monthly he will make an effort to have more honey eaten, and he himself will without coaxing or teasing Keep more Bees as the result.

However if Dr. Bonney or others prefer "Keep more Bees" on the front cover, why all right, I guess I can stand it, as I generally take the bitter with the sweet. As ever yours,

WILLIAM VOLLMER.

Read the wonderful clubbing rates on another page of this number and subscribe today.

The National Bee-Keepers' Association

And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
Amherst, Mass.
 FRANK C. PELLETT, Vice-Pres....
Atlantic, Iowa
 GEORGE W. WILLIAMS, Sec.-Treas-
 urer.....Redkey, Ind.

Directors

DR. BURTON N. GATES, Chairman
Amherst, Mass.
 E. D. TOWNSEND.....Northstar, Mich.
 J. M. BUCHANAN.....Franklin, Tenn.
 WESLEY FOSTER.....Boulder, Colo.
 GEORGE W. WILLIAMS.....Redkey, Ind.
 E. G. CARR.....New Egypt, N. J.

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
G. M. Frizzell Temple Ariz.
 ADIRONDACK—H. E. Gray.....
Fort Edward, N. Y.
 COLORADO—Wesley Foster.....
Boulder, Colo.
 CHICAGO-NORTHWESTERN—L. C.
 Dadant.....Hamilton, Ill.
 HAMPSHIRE—HAMPDEN—FRANKLIN
 Dr. Burton N. Gates.....
Amherst, Mass.
 IDAHO—R. D. Bradshaw, Notus, Ida.
 TWIN FALLS—C. H. Stinson.....
Twin Falls, Ida.
 IDAHO HONEY PRODUCERS' ASS'N—
 F. C. Bowman.....Idaho Falls
 ILLINOIS—Jas. A. Stone.....
Rt. 4 Springfield, Ill.
 INDIANA—Geo. W. Williams.....
Redkey, Ind.
 IOWA—S. W. Snyder, Center Point, Ia.
 KANSAS—O. A. Keen, Topeka, Kans.
 MASS. EASTERN SOCIETY OF
 BEE-KEEPERS.....
 Leslie A. M. Stewart, Franklin, Mass.
 MICHIGAN—O. H. Schmidt.....
Rt. 5, Bay City Mich.
 MINNESOTA—Dr. L. D. Leonard....
 515 Syndicate Bldg., Minneapolis, Minn.
 MISSOURI—J. F. Diemer.....Liberty, Mo.

NEW JERSEY—E. G. Carr.....
New Egypt, N. J.
 N. CALIFORNIA—Alwin P. Heim...
 16, Fair Oaks, Calif.
 N. MICHIGAN—Ira D. Bartlett....
East Jordan, Mich.
 OHIO—F. R. King.....Creola, Ohio.
 OREGON—Floyd E. Smith, Dallads, Ore.
 THE NEW MEXICO BRANCH—
 Henry C. Barron, Hagerman, N. M.
 PENNSYLVANIA—H. C. Klinger...
Liverpool, Pa.
 PUERTO RICO—J. W. Van Leenhoff
 Ponce, Puerto Rico, 11 Marina, St.
 SOUTH IDAHO AND EAST OREGON—
 R. D. Bradshaw.....Fayette, Ida.
 TENNESSEE—J. M. Buchanan.....
Franklin, Tenn.
 TEXAS—H. E. Graham, Gause, Texas.
 VERMONT—P. E. Crane.....
Middlebury, Vt.
 VINTON BEE-KEEPERS' ASS'N—...
E. J. Winder, Vernal, Utah.
 WASHINGTON—J. B. Ramage.....
Rt. 2, N. Yakima, Wash.
 WISCONSIN—Gus Dittmer.....
Augusta, Wis.
 WORCESTER COUNTY—J. S. Whitte-
 more.....Leicester, Mass.

Constitution of the National Beekeepers' Association

OFFICERS

DR. BURTON N. GATES, President
 AMHERST, MASS.
 FRANK C. PELLETT, Vice-President
 ATLANTIC, IOWA
 GEO. W. WILLIAMS, Sec'y-Treasurer
 REDKEY, IND.

DIRECTORS

DR. BURTON N. GATES, Chairman
 AMHERST, MASS.
 E. D. TOWNSEND, NORTHSTAR, MICH.
 J. M. BUCHANAN, FRANKLIN, TENN.
 WESLEY FOSTER, BOULDER, COLO.
 GEO. W. WILLIAMS, REDKEY, IND.
 E. G. CARR, NEW EGYPT, N. J.

ARTICLE I.

NAME.

This organization shall be known as
 the National Bee-Keepers' Association.

ARTICLE II.

OBJECT.

The object of this Association shall

be to aid its members in the business
 of bee-keeping; to help in the sale of
 their honey and beeswax, and to pro-
 mote the interest of bee-keepers in any
 other direction decided upon by the
 Board of Directors.

ARTICLE III.

PLAN OF ORGANIZATION.

This organization shall consist of one
 central organization with its various
 affiliated associations; these affiliated
 associations may be in any locality
 where fifteen or more members of the
 National Association decide to form a
 branch.

ARTICLE IV.

MEMBERSHIP.

SECTION 1. Membership shall be ex-
 tended to any person interested in bee-
 keeping, and who is in accord with the
 purposes and aims of this association

There shall be no membership fee in the National Association, excepting that required by the local affiliated association, which fee shall remain in the treasury of the latter. The subscription to the official organ, the BEE-KEEPERS' REVIEW, shall be \$1.00 per annum, which shall be sent to the Secretary of the National Association.

SEC. 2. Memberships shall begin at the time the membership fee is paid, and shall expire at the end of the time paid for, counting from date membership began.

ARTICLE V.

NATIONAL MEETING.

SECTION 1. The National Meeting shall consist of delegates duly elected by the various affiliated associations. These meetings shall occur during the month of February, the exact date and place to be decided by the Board of Directors.

SEC. 2. Each Affiliated Association shall be entitled to elect one delegate to attend the National Meeting, who shall present proper credentials, and, if correct, such delegate shall be entitled to one vote for every fifty members or fraction thereof in this local Association.

SEC. 3. At the annual meeting the delegates may hold one or more sessions open to bee-keepers for the consideration of such special or general topics as the Board of Directors may decide upon.

ARTICLE VI.

OFFICERS AND DUTIES.

SECTION 1. The officers of this Association shall be a President, Vice-President, Secretary and Treasurer. These officers shall be elected at each annual meeting of delegates and serve for one year, or until their successors are elected and qualified.

SEC. 2. The President shall preside at each annual meeting of delegates, and at any special meeting, which may be called. He shall also preside at all meetings of Directors and perform any other duties which may devolve upon the presiding officer.

SEC. 3. The Vice-President shall perform the President's duties in his absence.

SEC. 4. The Secretary shall keep a record of the proceedings of the annual meeting, maintain a list of all members of the Association, with their addresses, collect, receipt and pay over to the Treasurer all dues and member-

ship fees; keep a proper record of all business transactions, and perform such other duties as may be required of him by the Association or Directors.

SEC. 5. The Treasurer shall care for the funds of the Association, depositing the same in such depository as may be approved by the Directors. He shall also pay such orders coming to him as may bear the signature of the one authorized by the Directors to draw orders.

ARTICLE VII.

BOARD OF DIRECTORS AND THEIR DUTIES.

SECTION 1. A board of five Directors shall be elected by the delegates at their annual meetings as follows: In even years, 2; in odd years, 3; each of whom is to serve two successive years, or until his successor is elected and qualified.

SEC. 2. These Directors shall care for the business of the Association between the Annual Meetings. They shall have full supervision of the work of the officers elected, and shall have power to remove from office any Officer or Director not acting in accordance with the Constitution and By-Laws of the Association.

SEC. 3. The Board of Directors shall decide upon the compensation of the various officers, authorizing the amounts so decided upon to be paid from the general secretary.

SEC. 4. The Board of Directors shall have power to elect a General Organizer, whose duty it shall be to promote the organization of Branches throughout the United States and Canada. They shall also decide as to his compensation.

ARTICLE VIII.

ORGANIZATION OF BRANCHES.

SECTION 1. Local Branches may be established in any locality, but not interfering with a Branch already established, whenever the membership in that locality so desires.

SEC. 2. A Local Bee-Keepers' Association already established may become an Affiliated Association by a majority vote of its members, either by mail or at a meeting, and accepting the Constitution and By-Laws of this Association.

ARTICLE IX.

OFFICIAL ORGAN.

SECTION 1. THE BEE-KEEPERS' REVIEW, a monthly publication shall be published by this Association as its

official organ.

SEC. 2. Notices and reports published in the official organ, the BEE-KEEPERS' REVIEW, shall be considered ample and sufficient notice to the members, and it shall not be considered necessary to send a written or printed notice in addition to the one published in the REVIEW.

ARTICLE X.

AMENDMENTS.

This Constitution may be amended

at any regular meeting of Delegates by a two-thirds vote of Delegates present and voting provided that at least ninety days' notice of the proposed amendment be given to the Secretaries of the Branches.

ARTICLE XI.

RULES OF ORDER.

Roberts' Rules of Order shall govern all meetings of both the National and Affiliated Associations.

Secretaries of Local Associations are hereby notified that the following changes of the CONSTITUTION OF The National Beekeepers' Association will be acted upon at the Delegate meeting next February. You will kindly instruct your delegate accordingly.

NOTICE TO AFFILIATED ASSOCIATION SECRETARIES.

On another page of this number of the REVIEW you will find published the Constitution of the National Beekeepers' Association. Following will be found the proposed changes of said Constitution, as proposed by the Delegates at St. Louis, Mo., at our 1914 delegate meeting. Following the delegate proposed changes, you will find other proposed changes that have been suggested from time to time.

You are hereby requested to notify your Association of these proposed changes, and they to instruct their delegate how to vote upon said changes at the February, 1915, meeting.

You will kindly notify your delegate to the 1915 meeting that nothing can be added to these proposed changes at said meeting, but ANY UNDESIRABLE PORTION CAN BE OMITTED. See Article X of Constitution on another page.

Article I—Name

The name of this Association shall be, The National Beekeepers' Association.

Article II—Object

The Objects of this Association shall be to promote the interests of Beekeeping by the dissemination of useful and scientific knowledge concerning the care of Honey Bees and their products; the care of and marketing of Hive products; to promote social relations between those engaged in beekeeping; to create and maintain greater public interest in

Beekeeping and its importance in relation to Agriculture and Horticulture, and to advance the welfare of the members by all means not inconsistent with this constitution and laws hereinafter adopted.

Article III—Powers

Sec. 1—For the purpose for which this Association is organized as specified in Article II hereof, The Association shall have power,

(a) To have and keep a corporate seal.

(b) To hold in its corporate name such property as shall be deemed necessary and useful in carrying out the purposes of its organization.

(c) To print and publish such magazines, papers or other publications or periodicals as may be deemed essential or necessary to the purpose of the Association.

(d) To buy, sell or otherwise deal in such papers, books and beekeepers' supplies as may be deemed beneficial to the Association or its Members.

(e) To arrange and carry out plans for advertising honey and for obtaining publicity for hive products.

(f) To promote Lecture Courses, Field Meetings, and other educational means and methods in the science of Beekeeping as shall be deemed best calculated to promote the welfare of the Association and its members.

(g) To sell, lease or otherwise dispose of any property of the Association no longer needed in carry-

ing on its purposes.

Article IV—Funds

All moneys received by the Association shall be devoted:

(1) To the expenses of carrying on the organization, including the salaries of the officers and payment for supplies and merchandise, printing, etc.

(2) All surplus moneys remaining after the necessary expenses of the Association have been paid shall be expended as the Association shall direct in the circulation of literature in relation to bee-keeping, providing lecture courses, and such other educational means and methods as may be deemed essential to the interests of the Association or its members.

Article V—Membership

Membership shall be limited to persons who are in sympathy with the purposes of the Association.

Article VI—Annual Meetings

The Annual Meetings of the Association shall be held during the month of February of each year, and shall be composed of delegates selected by the respective Affiliated Associations. The exact date shall be determined by the Executive committee and Directors.

Article VII—Officers

Sec. 1. The officers of this Association shall be: President, Vice President and Secretary-Treasurer, who shall hold their respective offices for one year, or until their successors are elected and qualified, and five Directors who shall hold their offices for a period of two years;

Provided, that of the first board of directors, two members shall be chosen for a term of one year, and three members for a term of two years.

Article VIII—Duties of Officers

Art. 1. The duties of the President shall be to preside at all regular and special meetings of the Association, and act as chairman of the board of directors.

Art. 2. The duties of the Vice President shall be to preside in the absence of the President.

Art. 3. The duties of the Secretary-Treasurer shall be to keep a record of the proceedings of the

annual meetings, collect, receipt and care for all membership fees, dues, and all funds of the Association, unless otherwise ordered by the Directors, place such funds in the depository as may be approved by the Directors.

He shall pay out such money in the way and manner authorized by the board of Directors, and perform such other duties as required of him by the laws governing the Association.

Art. 4. The duties of the Board of Directors shall be to decide upon the compensation of the various officers, authorize said amounts to be paid out of the General Fund; act as chairman of the various Standing Committees, and to perform all other duties required of them by the laws of the Association.

Article IX—Organization of the Executive Committee and Further defining the Duties of Officers

Sec. 1. All routine and executive work shall be performed by the Executive committee, consisting of the President, Vice President, and Secretary-Treasurer.

Sec. 2. Special and new business within the province and consistent with the provisions of the constitution and by-laws governing the Association shall be performed by the Board of Directors, through their respective committees.

Sec. 3. All matters of new policy shall be determined by the Delegate Body, or if urgent, be referred back to the Affiliated Association.

Article X—Membership Fees

A membership fee of (\$2.00) two dollars per annum shall be paid by each member of the Association, of which (\$1.00) one dollar shall go into the subscription fund, and (\$1.00) one dollar shall go into the General Fund.

Article XI—Amendments

This constitution may be amended at any regular meeting of delegates by a two-thirds vote of the delegates present; provided however that at least ninety days' notice has been given to all affiliated associations.

**SECRETARIES ARE FURTHER NOTIFIED THAT THE FOLLOWING
RULES WILL BE ACTED UPON AT THE NEXT DELEGATE MEET-
ING IN FEBRUARY**

Rule No.—There shall be an annual fee of fifty cents collected from each member of the National Beekeepers' Association; said dues to be receipted for by the Secretary, and receipts turned in to the general fund of the National to be used the same as other funds of this Department. Said fifty cents paying the annual dues of the member one year from date of his receipt card.

Rule No.—Annual receipts from members residing in states, territories, or D. C. where there is no affiliated asso-

ciation shall be turned into the general fund of the NATIONAL BEE-KEEPERS' ASSOCIATION.

Rule No.—That officers and directors of the NATIONAL BEE-KEEPERS' ASSOCIATION all be elected by a direct vote of the members, by a mail ballot furnished for that purpose; and that no delegate meeting shall be called, except, as may be deemed necessary by the board of directors. Said meeting, and place of meeting to be decided upon by said board of directors.

The Secretary's Corner

GEO. W. WILLIAMS, Redkey, Ind.

There is always a bright side to the darkest cloud, and our wonderful fall flow, coming as it does after a bad season is right welcome, for it is giving us abundant stores for winter, and stimulating brood-rearing so as to insure good strong colonies of young bees, to go into winter quarters. We are having a second dandelion crop, a little golden-rod, and since Sept-15th, a wonderful flow from the little white heath aster, *aster ericoides*. There are probably 300 varieties of the aster family, and most of them yield as much or more honey than this variety, but in this locality it is the only one that is of much value to the beekeeper, as it is the only one that is prolific and persistent enough to amount to much. It is not a bad weed, as it is very modest and not the least in the way all spring and summer until about the first of September, when it rapidly springs into bud and bloom, and gives an abundant flow of dark, strong honey, not very desirable for table use but excellent for wintering in this climate. I doubt if it would be the best for extremely Northern latitudes, however, as it seems to have some pollen mixed with it.

We have noticed it for many years, but it has only been in the last few seasons that it has been plentiful enough to amount to much. We have encouraged it in waste places and it responds quickly. Once established, it spreads rapidly. It seems to love old meadows, orchards, waste corners, and is equally at home on poor clay knobs

or fertile ground.

Coming as it does at the right time, just before the close of good weather, and not being an undesirable pest like many other honey plants, makes it among the most valuable of our flora. For the beekeeper who has no fall flow and who has to feed for winter, this is well worthy of planting.

It is easy to start, and is a perennial, starting new shoots in the fall, and each plant bearing thousands of seeds that are so small and light that the wind and stock scatter them everywhere so that when once introduced, it rapidly spreads over the adjoining territory. As I stated above, however, it is an extremely modest plant, and seeks retired and waste places, and is rarely found in fields that are cultivated. I paid 50c per ounce for 4 ounces of seed 15 years ago, and the last four seasons there has been gathered from the resulting flowers, many tons of splendid wintering honey. Previous to this, I fed a great deal, and then lost heavily, frequently, as the fall dearth prevented late brood-rearing.

This is all changed, now, and I sometimes have quite a surplus.

I came across a little square dish in the glass factory some time ago, made just the right size for a 4x4 or 4x5 chunk of honey. In fact they called it a honey dish. You all know that I am something of a "crank" on advertising honey, and I immediately made it my business to investigate the mat-

ter, and find out at what price they could be procured, and if they could be made with some distinguishing mark, say a queen bee, or a hive, so that when empty it would suggest to the housewife to "Buy and eat a little honey." A constant reminder, in fact calling attention 365 days in the year to "Honey." I immediately took steps to have each one of my local customers procure one, and I impressed upon them that it was a HONEY dish.

Do you know that this is making quite a perceptible increase in our local honey trade? Quite a number have recently purchased honey especially to put in the little dishes.

This little dish is an imitation of cut glass, and has a lid and is quite ornamental. They come packed in barrels, 3 dozen in the package, and they cost \$1.20 per doz., and 50c for the packing and container.

This is for the dishes as they now are made. The manager of the factory offered however to fill orders for even \$400, f. o. b. here, and if the beekeepers wanted a sufficient amount of them he would make a mould with a special figure on it, but this will cost about 2c per dish more, as the moulds are expensive. If every housewife owned one of these handsome little dishes she would have a "constant reminder" especially dedicated to HONEY before her every time she sets the table, and it would induce her to order honey to put in it many times when she otherwise would not think of doing so. It will pay the local beekeeper to place them in the hands of his customers at cost if necessary and get the benefit of this "booster."

These barrels would be shipped by freight, and as the factory does no retailing at all, they will not sell a less number than 3 dozen, and then only to

dealers. I explained the use I expected them to be put, and he offered to fill any orders that may come in, if I would take care of them. If any one wishes a package or more, I will have them sent to you, but be sure that you send a stamp to mail the bill of lading as I am not in the business except to help "boost" and I am usually shy of postage stamps.

The Indiana readers will remember that our association meets on Nov. 16 and 17, at the State House. Dr. Phillips and several others from abroad will be with us, and we are expecting a general good time.

Our managing editor is doing himself proud lately, and he is giving us a paper that is a credit to our association, and getting better every issue. He is so modest that he disclaims the credit for it, but some of us know that it takes much work, and hard work, too, to make such a splendid paper as the REVIEW has been lately. The secretaries of the affiliated branches can assist him very much in extending the circulation of the REVIEW, and thereby strengthen their own branches. There has been and still is some opposition to the REVIEW, and it is not all from supply dealers either. But the actual producers of honey are realizing more and more the value of organization, and of an efficient organ devoted exclusively to their interests. One can understand the opposition of members who do not depend on bee products for their income, as they are not expected to feel the need of an organ especially, but it is difficult to understand how any producer can fail to support such a paper as our editor is giving us. The more subscribers we have, the better he can make the REVIEW. "Boost, brothers, Boost."

De Moines and Delmar Field Meeting

By FRANK C. PELLET, Atlantic, Iowa

The Iowa Field meetings continue to be interesting occasions. At the Coverdale farm on July 7th about seventy-five were in attendance. When it is remembered that Delmar is little more than a rail-

road junction and that the Coverdale farm is four miles in the country this we consider a very good attendance. The Coverdale farm has become famous for its sweet clover, its owner being one

of the pioneers in the growth of this plant for a field crop. At present about one hundred and fifty acres are in sweet clover. Mr. C. P. Dadant was present and gave one of his characteristic talks. The Iowa beemen appreciate the interest manifested by our Illinois friends in our meetings. Much time was spent in looking over the Coverdale apiary of 300 colonies and in informal discussion. The ladies of the Coverdale household with generous hospitality spread a fine dinner for those from a distance. Mr. Syverud, inspector of apiaries of South Dakota was present.

At the Dustman apiary at Des Moines on July 15th about one hundred and twenty-five were in attendance. The local committee had outlined rather an extended

program which was carried out for the most part. Among the speakers may be mentioned Prof. Tye of Drake University, Judge Chamberlain of Des Moines, Prof. Bartholomew of Ames, Hamlin B. Miller of Marshalltown, J. H. Schweer of Valley Junction, and R. H. Longworth of Polk City.

Much interest was manifested in the various demonstrations and it was decided as a matter of course to repeat the meeting again next season. The Polk county boys have organized a local club and purpo to get in on everything that is good while it is going. They are a bunch of live wires and frequent reports of something doing may be expected from Polk county. Our friend Dustman spared no pains to make the occasion a pleasant one.



SEVENTH IOWA SUMMER FIELD MEETING AT CLARINDA, AUGUST 12th, 1914

1—David Tharp, 2—F. G. Hausz, 3—Dr. E. L. Crowson, 4—A. J. Marley, 5—Mrs. L. R. Faulk, 6—T. E. Ostrus, 7—Mrs. Strong, 8—Oscar Ostrus, 9—Fred Borene, 10—C. B. Baxter, 11—O. E. Ostrus, 12—Carl Anderson, 13—William Loft, 14—J. L. Strong, 15—O. H. Johnson, 16—M. E. Darby, 17—E. J. Baxter, 18—R. J. Parker, 19—L. R. Falk, 20—H. C. Hartman, 21—Harold Ostrus, 22 Thos. Parker, 23—F. J. Gundelsperger, 24—T. A. McAlpin, 25—Kenneth Strong.

Program of the Third Annual Convention of the Iowa Beekeepers' Association

At Agricultural College, Ames, Iowa, November 17, 18, 19, 1914

Tuesday, November 17

10:00—Welcome and Response.
Address of President, Frank C. Pellett, Atlantic.
Report of Secretary, S. W. Snyder, Center Point.
Report of Treasurer, C. H. True, Edgewood.

Appointment of Committees.
1:30 p. m.—Short Course Demonstrations in charge of C. E. Bartholomew, Professor of Apiculture, Iowa College of Agriculture

7:30 p. m.—History of Bee Keeping, C. P. Dadant, Editor American Bee Journal.

Honey Flora of Iowa and Nectar Secretion, Dr. L. H. Pammel, Ames.

Bee Keeping in the Inter-Mountain Region (Illustrated), Wesley Foster, Boulder, Colorado.

Wednesday, November 18

9:00 a. m.—Fifty Years of Beekeeping in Iowa, F. Kretchner, Council Bluffs.

Temperature and Moisture of the Hive in Winter, Dr. E. F. Phillips, Washington, D. C.

Wintering Bees in Iowa, W. S. Pangburn, Center Junction.

Experience With European Foul Brood, J. I. Wiltsie, Arlington.

Discussion led by L. W. Elmore, Fair-

field.

Experience With American Foul Brood, D. E. Lhommedieu, Colo, Iowa.

Discussion led by J. W. Stine, Salem.
1:30 p. m.—Short Course demonstrations.

7:30 p. m.—Individual and Co-operative Methods of Marketing Honey, Wesley Foster, Boulder, Colorado.

Discussion led by P. J. Doll, Minneapolis, Minnesota.

Modern Short Cuts in Beekeeping, N. E. France, Platteville, Wisconsin.

Subject to be Announced, Dr. L. D. Leonard, Minneapolis.

Moving Pictures of the Honeybee.

Thursday, November 19

9:00 a. m.—Wild Bees of Iowa in Their Relation to Plant Pollination, L. A. Kenoyer, Toledo.

What the Agricultural College Can Do for the Beekeeper, Prof. Francis Jager, University of Minnesota.

Reports of Committees.

Election of Officers.

1:30 p. m.—Short Course demonstrations.

OFFICERS FOR 1914

President, Frank C. Pellett, Atlantic.

Vice President, J. W. Stine, Salem.

Secretary, S. W. Snyder, Center Point.

Treasurer, C. H. True, Edgewood.



Group in the Coverdale Apiary at the Delmer Field Meet, July 7th.

DIRECTORS

E. C. Wheeler, Marshalltown.
 Dr. A. F. Bonney, Buck Grove.
 Hamlin B. Miller, Marshalltown.

Every Beekeeper is urged to bring some samples of his product, for exhibition. No premium list can be offered in advance but the committee on awards will make such a disposition of the funds available as seems equitable. But a small cash fund is available this year but we hope for such a creditable exhibit as will enable the association to arrange a liberal premium list in connection with next year's convention.

A large display of supplies of standard

makes will be in exhibition as well as many new specialties and Beekeepers will have an opportunity to see for themselves what value there is in the new offerings.

It is expected that prominent queen breeders will also exhibit. The following supply dealers have already signified their intention of placing some of their goods on display.

A. I. Root Co., Medina, Ohio.
 Dadant & Sons, Hamilton, Ill.
 Kretchmer Manufacturing Co., Council Bluffs, Iowa.
 Minnesota Bee Supply Co., Minneapolis.

Ontario Beekeepers' Association Annual Convention

The Annual Convention of the Ontario Bee-Keepers' Association will be held in the York County Council Chambers, 57 Adelaide Street East, Toronto, Wednesday to Friday, November 11th, 12th and 13th, 1914.

All beekeepers in Ontario and those from other provinces who can make it convenient are cordially invited to attend. The Executive also extends a cordial invitation to beekeepers of adjoining states of the Union to be pres-

ent at this annual gathering of Ontario beekeepers.

It will be seen by the program that there are not as many set subjects this year as usual. We have always found that to give time for discussions our programs have been too full and important questions in the questions boxes have had to be left over to be answered in the bee journal. The effort this year is to give more time than usual to the question boxes



Big Guns at the Delmer Field Meet July 7th. Reading from left to right: Frank Coverdale, Delmer; Prof. C. E. Bartholomew, Ames; C. P. Dadant, Hamilton, Ill.; S. W. Snyder, Center Point, Sec. Photo by Frank C. Pellett, Vice President, National Association.

which form such an important part of the program of any Beekeepers' Convention.

The following is the program:

PROGRAM.

Tuesday Evening, Nov. 10th, 7:30 P. M.

Meeting of Officers and Directors.

Wednesday Morning, November 11th,
9:30 A. M.

Minutes—Morley Pettit, Guelph, Ontario, Secretary-Treasurer.

President's Address—J. L. Byer, Markham, Ont.

1st Vice-President's Reply—F. W. Krouse, Guelph, Ont.

2nd Vice-President's Reply—Jas. Armstrong, Cheapside, Ont.

Experiences of the Season of 1914—O. L. Hershisser, Kenmore, N. Y.

Discussion—Jno. A. Lunn, Fingal, Ont.

Wednesday Afternoon, 2:00 P. M.

Specializing in Beekeeping, Its Advantages and Disadvantages, W. A. Chrysler, Chatham, Ont.

Discussion—F. W. Krouse, Guelph, Ont.

Report of Apiary Inspection for the Season—Morley Pettit, Guelph, Ont.

Question Box—Jno. A. McKinnon, St. Eugene, Ont.

Thursday Morning, November 12th,
9:30 A. M.

Putting Up a Honey Exhibit—H. G. Sibbald, Toronto, Ont.

Question Box—J. F. Dunn, Ridgeway, Ont.

Thursday Afternoon, 2:00 P. M.

Address—W. Bert Roadhouse, Deputy Minister of Agriculture, Toronto, Ont.

Election of Officers.

Reports—Directors, Treasurer, Honey Crop Committee, Representatives to Exhibitions.

Friday Morning, Nov. 13th. 9:30 A. M.

Sweet Clover, Its Culture and Uses—Wm. Linton, Aurora, Ont.

Good Combs and How to Obtain Them—Geo. F. Kingsmill, B. S. A., Assistant Apiarist Central Experimental Farm, Ottawa.

Discussion—J. D. Evans, Islington, Ont.

Question Box—Wm. Couse, Syreetsville, Ont.

Friday Afternoon, 2:00 P. M.

Simple Method of Rearing and Introducing Queens—F. W. L. Sladen, Apiarist, Central Experimental Farm, Ottawa.

Unfinished Business.

Secretion or Nectar

F. W. SLADEN, Asst. Entomologist for Apiculture, Central Experimental Farm, Ottawa, Canada.

Read before the National Beekeepers' Association Convention, St. Louis, February 19, 1914

The abundant secretion of nectar depends upon many factors. One of these is the stage in the flowering season of the plant in which the flowers appear. In the southeast of England the White dead nettle (*Lamium album*) is, in the early part of May visited from morning to night by a constant stream of bumble-bees but by the end of May the flowers, though sometimes more numerous than before, have lost a good deal of attractiveness. The garden plant *Arabis alpina*, which blooms in England in April and May, lures numerous honey bees during the first half of its flowering period, but during the latter half it is more or less neglected. The gradual desertion of the flowers

of these and other species of plants by the bees is usually ascribed by beekeepers to the opening of flowers of others species more attractive to the bees. But investigation has convinced me that the later flowers produced by many spring blooming plants actually secrete less nectar than the early ones and that this is chiefly why they are neglected. Fresh whorls of flowers keep opening at the top of the spike of the white dead nettle, but they do not bring any more visitors.

This peculiarity is not confined to spring flowers. How seldom do we see bees on the belated heads of white clover in August and Sep-

(Continued on page 424)

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with comb less than two-thirds cells, exclusive of the row adjacent; sections with more than 60 unsealed patched up sections; sections weight to the box; leaking, injured, or

ALBANY, N. Y.—Comb honey coming forward very slowly and seems to be little to come at least from this vicinity. We quote Fancy White Comb 18, Medium 16-17, Mixed 15, Buckwheat 14. Extracted dull but demand for new crop improving at 8½-9 for white, 7½-8 for amber, 7½ for buckwheat. Beeswax 32 to 34 for clear stock.

Respectfully,

Sept. 25.

H. R. WRIGHT.

CHICAGO—The firm feeling noted last month in comb honey continues and 17c per lb. is obtainable for white clover and linden comb where the wood attached to the comb is allowed for. There is no surplus of off grades and the market is taking practically all that comes with prices ranging from 1c to 3c per lb. less according to kind and condition. This includes the amber grades as well as the buckwheat.

Extracted white grades of clover and linden including water white sage sells at from 9c to 10c per lb. with other white honey very slow of sale at a range of from 7c to 8c per lb. Ambers range from 6c. to 8c. per lb. according

to what gathered from and quality thereof. Beeswax is steady at from 33c to 35c per lb.

Very truly yours,

R. A. BURNETT & CO.

173 W. South Water St.

Oct. 17.

The Wisconsin branch of the National will hold their annual meeting at Madison, November 24th and 25th. Good program is in course of preparation. All Wisconsin beekeepers should turn out at this time and a very profitable meeting is assured. For program and further particulars, write the Secretary, Gus Dittmer, Augusta, Wis.

Read the wonderful clubbing rates on another page of this number and subscribe today.

The Review Debt Subscription List

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we must have many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at laest swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously reported.....	\$123 25
H. F. Meader, West Bend, Wis.....	50
Earl F. Townsend, Milford, Mich.....	1 00
W. E. Forbes, Plainwell, Mich.....	50
L. H. Apiaries, Clarkston, Mich.....	39
G. B. Lewis Co., Watertown, Wis.....	50 00
Idaho Honey Producers Ass'n Idaho Falls, Idaho....	10 00
F. B. Wilde, Wayland, Mich.....	1 00
E. G. Carr, New Egypt, N. J.....	1 00
J. Edgar Ross, Brawley, Calif.....	4 50

Subscriptions to the Review debt are not coming as fast as we anticipated; still, we have at this writing \$192.14, the last month's contribution being the largest yet, which is very encouraging. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the August REVIEW. We feel proud of the above list. It is the largest one yet and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we should like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

Notice to Secretaries

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we are very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	120
P. R. King, Ohio.....	34
Gus Dittmer, Wisconsin.....	23

H. E. Graham, Gause, Texas..	22
E. G. Carr, New Jersey.....	17
L. T. Rogers, Shreveport, La.	17
H. E. Gray, New York.....	16
E. J. Winder, Utah.....	15
P. E. Crane, Vermont.....	15
J. S. Whittemore, Massachusetts.....	14
S. W. Snyder, Iowa.....	13
Dr. L. D. Leonard, Minnesota	11
Geo. W. Williams, Indiana...	11
B. N. Gates, Massachusetts...	9
Henry C. Barron, New Mexico	8
J. W. VanLeenhoff, Puerto Rico.....	7
C. H. Stinson, Idaho.....	7
Floyd E. Smith, Dallad, Ore..	4
O. H. Schmidt, Michigan.....	3
J. F. Diemer, Missouri.....	3
L. C. Dadant, Chicago, Northwestern.....	3
Alwin P. Heim, California....	2
F. C. Bowman, Idaho.....	2
R. D. Bradshaw, Notus, Ida..	2
J. B. Ramage, N. Yakima, Wash.	2
H. C. Klinger, Liverpool, Pa..	1

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzl, Lincoln, Ill.
Wm. Marshall, Carpentersville, Ill.

HORSEMINT

Wilmon Newel, College Station, Tex.
Alfred L. Harlt, Elmendorf, Texas.
A. L. Krueger, New Ulm, Texas.
H. E. Graham, Gause, Texas.
H. D. Murry, Mathis, Texas.

RASPBERRY

J. N. Harris, Mancelona, Mich.
C. J. Freeman, Bagnall, Mich.
O. H. Townsend, Butterfield, Mich.
F. D. Stephens, Box 383, West Branch, Mich.
F. C. Hutchins, Santa Clara, N. Y.

ALFALFA

J. H. Stoneman, Blackfoot, Idaho.
A. A. Lyons, Fort Collins, Colo.
Chas. H. Hanney, Lander, Wyo.
Webber Bros., Rt. 2, Blackfoot, Idaho.
J. Edgar Ross, Brawley, Cal.
Robert E. Foster, Rifle, Colorado.
H. Trickey, Box 383, Reno, Nev.
J. R. Marlow, Rt. 1, Weiser, Idaho.
W. H. Pennington, Ontario, Ore.
Alfred Powell, Vernal, Utah.
Wesley Foster, Boulder, Colorado.
Bruce Baldwin, Durango, Colo.
Idaho Honey Producers' Association, Idaho Falls, Idaho.
T. H. Waale, Nampa, Idaho.
Arizona Honey Exchange, Tampe, Arizona.
C. Stimson, No. 1, Holly, Colo.

AMBER

E. F. Smith, Chadwick, Ill.
J. Edgar Ross, Brawley, Cal.
G. Frank Pease, Shreveport, La.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
A. H. Fralick, Homer, Minn.
LaGrand LaRow, Mercedes, Texas.
Quirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
O. P. Hendrix, West Point, Miss.
J. M. Cutts, R. 1, Montgomery, Ala.
A. L. Krueger, New Ulm, Texas.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.
N. E. France, Platteville, Wis.
F. Gobeli, Glenwood City, Wis.
Frank Kittenger, Rt. 11, Franksville, Wis.
R. A. Schwarzkopf, Tilleda, Wis.

C. D. Townsend, Stockbridge, Mich.
E. D. Townsend & Sons, Northstar, Mich.

Frank Kittinger, Caledonia, Wis.
W. H. Townsend, Hubbardston, Mich.
John Homack & Son, R. No. 3, McGregor, Iowa.

B. A. Aldrach, Smithland, Iowa.
E. Woodall, Goodman, Wis.
A. F. Roska, R. No. 2, Swartz Creek, Mich.
E. H. Canfield, Carson City, Mich.
F. W. Lesser, E. Syracuse, N. Y.

WHITE CLOVER

E. F. Smith, Chadwick, Ill.
R. C. Zeader, ..
E. B. Rosa, Monroe, Wis.
F. M. Dittmer, Augusta, Wis.
B. F. Schmidt, North Buena Vista, Ia.
N. O. Walker, Franklin, Tenn.
E. D. Lerch, Morrisonville, Dane Co., Wis., No. 19.
Byron S. Hastings, Rt. 5, Brookville, Ind.
E. A. Doney, Dixon, Iowa.
C. J. Oldenberg, Belle Plains, Minn.
J. H. Allemier, Delphos, Ohio.
Snyder Bros., Center Point, Iowa.
C. J. Barber, Smithland, Iowa.
C. L. Pinney, LeMars, Iowa.
A. S. Crotzer, Lena, Ill.
W. H. Pearson, Mitchellville, Iowa.
M. H. Lind, Baders, Ill.
Wm. Fox, Withee, Wis.
W. E. Forbes, Plainwell, Mich.
Wm. E. Prish, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
Niels A. Nelson, Dike, Iowa.
Geo. E. Capwell, Cottonwood Falls, Kan.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
Dell E. Berryman, 2308 20th ave., Central City, Nebr.
Geo. W. Woodhull, Kinde, Mich.
Wm. E. Dailey, R. 3, Woodsock, Ill.

ORANGE

James McKee, 559 Grand Ave., Riverside, Calif.

BUCKWHEAT

Jas. McNeil, Hudson, N. Y.
C. H. Burrows, Oran, N. Y.
Wilmer Clarke, Eastville, N. Y.

HWAJILLA

Frank Talbot, Pearsall, Texas.

SAGE

George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.
R. J. Krause, Dehesa, Calif.

OHIO BEE-KEEPERS' ASSOCIATION.

Our association held a field meet at Medina, O., 9th and 10th of this month. There were about 200 in attendance. This was not a large attendance but it represented all of the border states besides New York and Sweden.

I attribute the small attendance to the rush of wheat and hay harvest. I guess we can call it a success. Everybody enjoyed themselves very much and appreciated the generosity of the Root Co. and the talks of Mr. A. I. Root.

We gained about 60 new members to our State Association.

Yours very truly.

E. R. KING,
Secretary.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

James T. Johnson, R. F. D. No. 1, Percy, Ill.

Henry J. Zinn, 1135 Who. Ave., Forty Fort, Pa.

Rocky Mountain Bee Co., Forsythe, Montana

H. H. Thale, Maywood, Mo.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS — Lowest price. PEARL CARD CO., Clintonville, Conn.

White Clover honey for sale. Albert Tien, Falmouth, Mich

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. W. W. Marinaduke, Washington, Ind. tf

WRITE US for prices on car lots of Fine Alfalfa Extracted honey to be delivered after July. Address MARTIN BROTHERS, Lander, Wyoming.

FOR SALE—Fine well ripened white clover honey in 60 pound cans, also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—One car Alfalfa extracted honey. Address W. H. Pennington, Ontario, Ore.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Extracted honey, car lots or less. Alfalfa or Alfalfa and Sweet Clover mixed. Could use some from other sources. W. HICKOX, Forsyth, Mont.

CALIFORNIA ORANGE BLOSSOM HONEY—Extra fancy, at 9c. Safe arrival guaranteed. Sample free. JAMES McKEE, Riverside, Calif.

FOR SALE—Horsemint extracted honey. Also dark honey from Huckleberry. Put up in new 60 pound tin cans. Write for prices. A. L. KRUEGER, New Ulm, Texas.

FOR SALE—A carload of fine Clover and basswood blend of extracted honey, in New York state. Parties interested kindly address CARLOAD, Care THE BEE-KEEPERS' REVIEW, Northstar, Mich.

FOR SALE—A fine grade of Clover extracted honey; also some blended with basswood. New 60 pound net tin cans, two in a case for shipment. Sample free. Address C. D. TOWNSEND, Stockbridge, Mich.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

FOR SALE—1000 colonies of bees in 10 frame hives. Located in 10 apiaries in the Imperial Valley, where crop failure is unknown. Profits for five years, have averaged more than 100 per cent annually. Owner retiring from active business. J. Edgar Ross, Brawley, Calif.

WANTED—To buy 3000 lbs to a car load of Comb and Extracted honey. Iowa, Wisconsin or Michigan preferred. Quote prices. W. H. HYDE, New Canton, Ill.

COMB HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We will pay 32c per pound for nice, clean, bright yellow Beeswax. Chas. Israel Bros. Co., 486 Canal St., New York. Established in 1875.

FOR SALE—3000 lbs. extra fine clover and basswood blend of extracted honey, ripened on the hives and stored in new 60 lb. net tin cans. This honey is at my home in Bay City, Mich. Write for free sample and price stating amount you can use. Address O. H. Schmidt, 914 Court St., Reading, Pa.

FOR SALE—Light amber extracted honey of excellent quality for table use at only 7c per pound on car. Well sealed and good body. A sample will convince you. We have five tons of it and to close it out soon we are offering it at this very close price. In 60 lb. net tin cans, two in a case for shipment. E. D. TOWNSEND & SONS, Northstar, Michigan.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys this superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

BEEES AND QUEENS

FOR SALE—Ninety-four colonies of bees in nine frame hives. Also about 200 supers and other equipment for working them. Address A. S. CROTZER, Lena, Ill.

FOR SALE—15 colonies bees. Also 15 new 8 frame hives and a quantity of foundation. Clyde Cobb, Belleville, Ark.

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. Beebe, Mosinee, Wis., Route No. 1.

Secretion of Nectar

(Continued from page 419)

tember!

The chief honey plant on the chalky uplands in the southeast of England is "giant" Sainfoin, a variety of *Onobrychis sativa*. The farmers grow it for fodder, sheep pasturage and seed. It is cut twice, sometimes three times in the season. It first comes into bloom about June 10 and then yields a crop of honey if the weather has not been very wet and is fairly warm. It is cut when in full bloom and blooms again in the middle of July. From this blooming comes the main honey crop of the season. The weather conditions are more favorable, the plant is shorter and less succulent and the flowers are more abundant than during the first blooming. There is often a third flowering in Mid-August. Weather conditions are then generally as good as in July and the bloom is sometimes as abundant, the fields being frequently pink with it. But no honey crop has ever been obtained from this third flowering. In England Sainfoin is sown in May, usually in a young grain crop, and sometimes produces a few flowers in August of the same year, but these flowers attract very few bees.

But we must not hastily conclude that in every species of plant, other conditions being equal, the mature plant secretes more nectar when it first comes into bloom than later. Last summer, at Ottawa, I watched with keen interest the opening of the golden-rods and asters, two groups of honey yielding plants that are absent from Britain. During the first two weeks of flowering hardly a bee was seen on them. The weather was dry and I concluded that moisture must be the missing factor, but I was surprised to find that the bees began to work a little on the golden rod during the third week of blooming though there had been no rain. At this time the goldenrod was in full bloom and the earliest flowers on most plants had withered.

These considerations are of practical value for they bear on such a question as, when is the best time for a beekeeper who is surrounded with sweet clover to cut a portion of it so as to get a crop

of honey when the main crop is over?

The vicissitudes through which the plant has passed before flowering often have a great effect on the honey yield. Every beekeeper in the north knows that severe winter frosts if prolonged or often repeated when there is no protection by snow injures and kills the white clover plants in great numbers. A sharp frost following a warm period in May is said to damage the young shoots. But it is uncertain how far these anti-flowering conditions affect the nectar yield of such flowers as are fully formed.

Passing on to other factors that influence the secretion of nectar we know that moisture in the soil and high temperature are of very great importance. The requisite degree of temperature and of moisture for the production of the largest amount of honey differs widely in different species of plants. White clover, (*Trifolium repens*) requires a moderate amount of heat and a good deal of moisture. It fails to give a good crop without rain, but a soaking shower or two, even when the clover is in full bloom, will turn failure into success. In British Columbia the countryside is sometimes white with clover heads but the weather is too cold for secretion. In twenty years I never had a good honey flow from white clover on the southeast coast of England. It was always too cold or too dry. Sweet clover (*Melilotus alba*) yields well in a drought but needs heat. With a temperature never rising above 65 degrees I found that an acre of sweet clover adjoining my apiary in England gave hardly any honey. Sainfoin is spoilt by much rain before blooming but will yield well at a low temperature (between 60 and 65 degrees) even with very little sunshine. Heather (*Calluna vulgaris*) like other plants, usually yields best on warm days, but the heaviest one day's increase in weight of a colony in the north of England 10 lbs. noted by Dr. Moore Ede in the two seasons 1909 and 1910, was on a day (Sept. 4th, 1909) that began with a heavy early morning hoar frost (temperature 34 degrees). The bees brought in most honey between 8 a. m. when the temperature was only 48 degrees, and 10

FOR SALE—Orange honey, 1914 crop. Packed in 60-lb. cans, 2 in a case, net weight. Price 9c per lb. Sample free. JAMES McKEE, 559 Grand ave., Riverside, Calif.

It is your right when buying queens to demand a pedigree. We send one with each order for queens. Border City Apiaries, 223, N. B. St. Ft. Smith, Ark.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

A student with some experience desires a position with some experienced apiarist during winter in the south. Florida, Cuba or Porto Rico, suggested. Interested party address Winter, in care of The Bee-Keepers' Review, Northstar, Michigan, U. S. A.

FOR SALE—Three Banded Italian Queens, bred from the best honey gathering strains that are also hardy and gentle. Untested queens 75c; six \$4.25; 12, \$8.00; tested \$1.25; six \$7.00; 12, \$12.00. For select queens add 25c each to above prices. Breeding queens \$3.00 to \$5.00 each. For queens in larger quantities write for prices. ROBT. B. SPICER, Wharton, N. J.

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen.....	.....75
1 doz.....	.....\$7.20
4 doz. or more.....	.....50 cents each

J. H. HAUGHEY, Berrien Springs, Mich.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

BEEKEEPERS' SUPPLIES sold at a reduction. Marshfield Sections and Falcon Foundation in stock. Send for my prices free. The Bee and Honey Man W. D. SOPER, Jackson, Mich.

WHITE SWEET CLOVER SEED—10,000 pounds unhulled at 12c per pound, 8,000 pounds hulled cleaned seed at 20c per pound sacks 25c extra. Immediate shipment. B. F. SMITH JR., Cowley, Wyo.

FOR SALE—Twenty-five colonies of heavy, healthy bees. Forty comb honey supers complete. Empty bodies, etc. Two incubators. Two horse engine, with saw and feed grinder. Address G. M. Withrow, Mechanicsburg, Ill.

FOR SALE—100 second hand 8 and 9 frame hive bodies at 20c each. Write for description. C. D. TOWNSEND, Stockbridge, Mich.

WANT TO SEND YOU our catalogue and price list of behives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

WANTED—S. C. B. Leghorns, Pullets and Cockrels and other varieties good for laying. Breckel Brothers, Lewis Ave., West Toledo, Ohio.

We have for sale at Plano, Ill. 100 lbs of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb., in 50 lb. lots or more. Address The Bee-Keepers' Review, Northstar, Mich.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

Gather in the White Sweet Clover Seed

Those who have had experience tell us that it is wonderful how well white sweet clover yields seed. We were wondering if there were not many of our members who live in a locality where sweet clover seed can be harvested at a profit.

The very best seed is cut and thrashed by hand, then run through a fanning mill. This is the method that produces the unhulled variety, which is usually free from weed seed or foreign matter.

LABELS FOR HONEY—According to the interstate commerce ruling, honey put up for retail trade since September 3rd, MUST contain a net weight label. The little label shown here is one inch by two inches and is gummed all ready to stick to the section, or jar, as the case may be. The reading can be changed to suit each individual need without extra charge. The figures indicative of the number of ounces can be left blank, and the amount written in with a pen, if so desired. 2000, one by two inch, net weight, gummed Labels for only a dollar, postpaid. Address the Bee-Keepers' Review, Northstar, Michigan.

This Honey produced by

HOMER G. SMITH
Parkville, Mich.

It contains 14 ounces of HONEY
exclusive of wood.

a. m. when it was 52 degrees. (British Bee Journal 1909 p. 464). Moist air with slow evaporation seems to be necessary for a good gathering from heather. On the other hand alfalfa seems to need a very dry air and also considerable heat. It produces no honey in England. I may here remark that the bees at the Central Experimental Farm at Ottawa declined to work to any extent on a field of buckwheat in which owing to drought the nectar was drying up, though it glistened in the flowers and could be tasted.

Rainfall and temperature vary from day to day and from season to season in almost every place but there are a number of unchanging conditions peculiar to certain localities that greatly affect not only the abundance but also the quality of the nectar secreted. These are differences in soil, subsoil, drainage, altitude, latitude, nature of vegetation as regards woodland or prairie lie of the land as regards sunshine and exposure, etc. Usually where the plant grows and flowers best, excluding rank growth, we shall find that it secretes most nectar. But there are exceptions, and the combinations of conditions that produce the best results in different regions are puzzling and sometimes even paradoxical.

For instance, in England, heather requires, in order to yield well, not only a peaty surface soil, but a suitable subsoil. In one region near the northeast coast whinstone subsoil is considered to be of no value for honey; though the heather grows well and flowers profusely on it, and the bees are sent to the more distant moors that have a granite subsoil, whereas in the west where the climate is milder and moister, whinstone is found to yield excellent results. (See Sitwell's paper in the Brit. Bee Journal 1912 p. 133).

Soils and subsoils have a great effect on honey yield. In the majority of instances, perhaps all, the soil or subsoil that produces best results is the one that is best adapted to the plants from a seed producing standpoint. Dr. Malte says that in Central Ontario certain gravelly-clay soils rich in lime are especially well adapted to Alsike Clover, (*Trefolium hybridum*). We

know how well the farmers of this region have succeeded in raising alsike seed, and that it is from this plant that the beekeepers of Ontario get most of their honey. In England the largest yields of sainfoin honey and also the best sainfoin seed are obtained in regions where the subsoil is chalk. The value of the chalk subsoil is probably here partly due to its porosity, for sainfoin needs good drainage. Even in the case of heather, a plant that is more partial to moisture than Sainfoin, Sitwell says that a rank growth in damp places and low lying moors gives a very poor return and the sample is thin, watery and of poor keeping quality. Drainage is therefore important. Yet we all know plants that will only flourish and yield nectar in swamps. In Canada the touch-me-not (*Impatiens biflora*) is one of the best examples.

Nectar secretion is probably influenced by several factors not mentioned, and perhaps not known. Who can tell exactly why in many parts of Ontario basswood gives a crop of honey only once in four or five years?

It need hardly be pointed out that a careful study of the conditions that favor an abundant secretion of nectar of the best quality in our most important honey plants would be of very great value, especially for the purpose of choosing new locations for apiaries and also in any form of migrating beekeeping such as taking the bees to the buckwheat fields. We have plenty of figures giving the total yield of light and dark honey from year to year in various apiaries. This is very useful as far as it goes, but in order to attempt to discover all the factors controlling nectar secretion in our most valuable honey plants we want more direct and detailed evidence, taking into consideration all the different conditions that are likely to affect results.

The causes of variation in the nectar yield of a honey plant may, for practical purposes, be divided into three classes: 1. Permanent: These include climate, soil, subsoil, natural drainage, etc., all of great importance in choosing a location. 2. Fluctuating: namely, weather with its ups and downs of temperature, rainfall and sunshine;

this the beekeeper usually need not worry about beyond ascertaining the extent of fluctuation in his district. 3. Artificial: such as the cutting of the plant before maturity to bring on a later yield, draining land and feeding the plant, for instance, applying lime for clover where it is deficient in the soil.

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Milford, Oakland Co., Mich.,
Sept. 16, 1914.

I am planning on starting another yard, where there is no cellar and not very good ground to build one, so want your advice, if you were starting again would you use the present style Buckeye Hive or your 4-inch on large winter case? I do not care to handle the hives any more than absolutely necessary for good care. The yard is to be in a nice piece of scattering woods well protected on north and west and I thought if you advised the Buckeye Hive I might have a winter front made something like the drawing below and keep snow out of entrance and danger of melting and freezing blocking the entrance.

This overhanging entrance could be "hooked on" at the approach of winter and as you can see would not allow ice to form as all melting snow would run off.

Let me hear from you when convenient. How about the cost of your "4-inch case?" I mean what does this winter case cost to make?

Sincerely,

EARL F. TOWNSEND,
Milford, Oakland Co., Mich.

(Answer:—We are very positive that no one would prefer a clumsy double walled hive for out-yard use, after using the single walled hive. There is too much moving about in outyard work to tolerate such large hives. Then there are many manipulations during summer where the easily handled single walled hive is much superior to any double walled one, no matter how well made.

No, sir'ee! We had at one time a hundred double walled hives, and when we saw that they were not suited to outyard work, we disposed of them and have since wintered otherwise. No more for us!

You will find a description of our four colony winter case on another page of this number of the Review. Ed.)

GET TOP NOTCH PRICES FOR YOUR HONEY BY USING LEWIS SECTIONS AND SHIPPING CASES Send for Annual Catalog which will tell you who is your nearest Distributer. G. B. Lewis Company, Watertown, Wis.

Deer Plain, Ill., Sept. 21, 1914
 The Bee-Keepers' Review:—I would like to know what ails the Bee fraternity at large—is it a case of actual starvation or is it neglect, that the Review debt is not being paid promptly by donations of its members? I think if the Review must be sold by default, the Association ought to disband and go out of existence.

I wish to herewith extend my heartfelt thanks to you and all others who have so generously contributed to this fund. Hope that those who have neglected to do their part will step to front and do their part.

Yours truly,

F. X. ARNOLD.

In deference to some of the Officers, Directors and Delegates, the REVIEW has not talked trade much so far this year and will not until 1915, after which the majority ought to be recognized.

October 1st, 1914, Statement of Ownership, Management, Circulation, etc., of the BEE-KEEPERS' REVIEW published monthly at Northstar, Michigan, required by the Act of August 24, 1912.

Managing Editor—E. D. Townsend, Northstar, Mich.

Business Manager—E. D. Townsend, Northstar, Mich.

Publisher—The National Bee-Keepers' Association, Northstar, Mich.

Owners—The National Bee-Keepers' Association, Northstar, Mich.

Known bondholders, mortgagees, or other securities: The National Bee-Keepers' Association purchased the BEE-KEEPERS' REVIEW on a contract from E. B. Tyrrell, Detroit, who now holds said contract.

Signed,

E. D. TOWNSEND.

Sworn to and subscribed before me this 1st day of October, 1914.

F. L. COSS, Notary Public.

My commission expires March 17, 1918.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

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THE BEE-KEEPERS' REVIEW
Northstar, Michigan

BEEKEEPERS OF WESTERN NEW YORK TAKE NOTICE.

There will be a meeting held at Akron, Erie Co., N. Y., Tuesday, Dec. 15, 1914, at the American Hotel, commencing at 10.30 a. m. and closing at 3.30 p. m. There will be some of the best beekeepers in Western New York there to speak and there will be other discussions on bee culture. This meeting coming soon after the Syracuse meeting will give those that reside in Western New York a chance to gain the latest knowledge pertaining to bee culture and a chance to form a branch of the N. B. K. A.

Akron is but 20 miles east of Buffalo on two railroads and two state improved highways, those that cannot make connections on these lines living on the Erie, Lehigh or Lackawanna R. R. and wish to come can do so by corresponding with John N. DeMuth, Pembroke, N. Y., he will find a way or meet you.

The American Hotel is an ideal place for such a meeting, offering the best accommodations at a reasonable rate, the hall is free to all.

Come and get acquainted, learn something, see what the other fellow is doing, get together, talk it over, have a good time, take a day off, it will pay in the end.

Obligingly yours,

JOHN N. DEMUTH.

Management of Three Thousand Colonies Bees in 50 Yards

(Continued on page 402)

that day I took my helper around to the first three yards in which we had made increase and found that the young queens had emerged from the cells which we had three days previous removed from the combs of the colonies made queenless and placed in the cell protectors and inserted in the comb of the queenless parts. All during this day's work I was instructing and demonstrating to my apiarist how to build up this increase and the weaklings into full colonies by giving them frames of sealed brood and spreading the brood nest where queens were very active.

That night in the "shack," after the lamp was blown out, we lay until a very late hour, talking over our undertaking and the task that

lay before us. Next morning early I left for home feeling that a great thing had been done towards the spreading of the business.

On April the 15th I wrote my apiarist to put a super on each colony that was strong and had lots of brood and during the time keep working at the weaker ones, supering them along as they built up and needed it and as soon as work was on in full in a super to raise it up and place another under it. By July the first the flow was over, this was from Chincapin and the honey was of no commercial value and the idea was to make increase on it and get a lot of comb built in the sections. I sent him a cheap helper and instructed him to take off all the honey in supers which was in one pound sections and extract and put the supers back on the bees, hauling it in and taking out some supers each time he made a trip for honey. My record showed that the main and good honey flow came on the latter part of July and the bees in this way would be made ready for it. Well it did and the harvest was a good one and about the time it was drawing to a close the other flow came on, the flow on which the bees had done fairly well the summer before and nearly all the unfinished supers were completed during this flow. The task was not completed and the honey all shipped to market until late in winter.

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WHITE SWEET CLOVER SEED—We are getting in "touch" with several members who will harvest a considerable White Sweet Clover Seed this fall. Last season we could not get half enough of the unhulled white to supply our members. We would suggest that those wanting seed place their order early this fall, as we anticipate another season of heavy demand. You may send in \$15 per hundred pounds for the unhulled white variety, and if the price is more or less this can be adjusted at the time of shipment. Address The Beekeepers' Review, Northstar, Mich.

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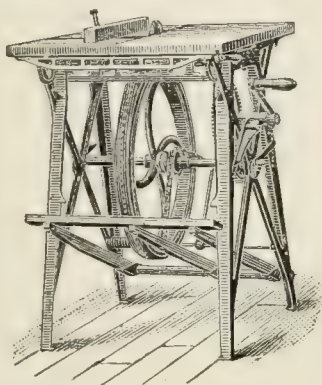
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ing to do for them next year! Honey crop short. Yours very truly,

ROBT. J. HUDSON.

(Friend Hudson: We refer you to another column of this number of the REVIEW, under the caption of The Future Policy of the REVIEW.—Ed.)

Read the clubbing rates.

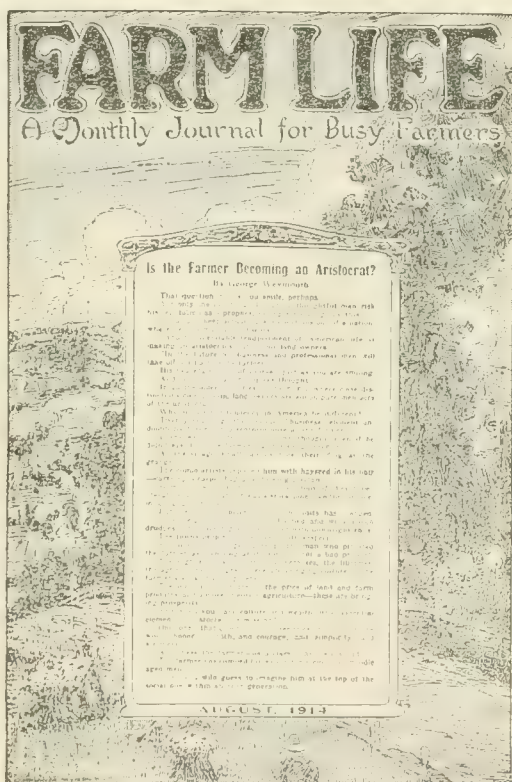
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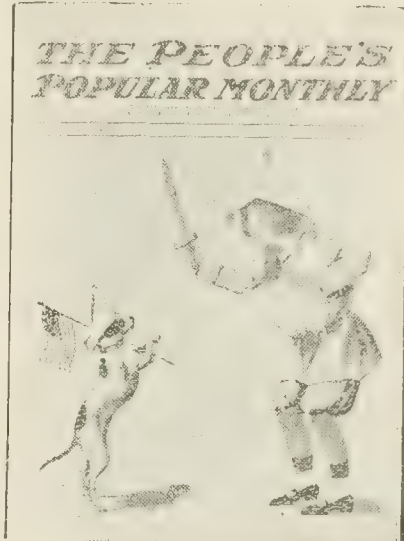


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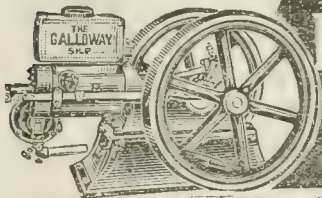
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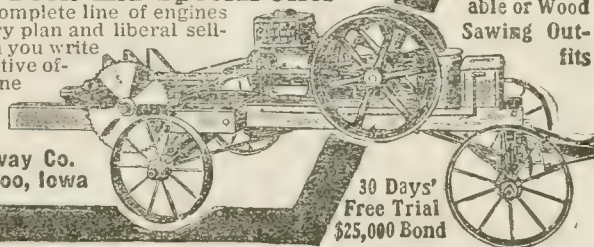
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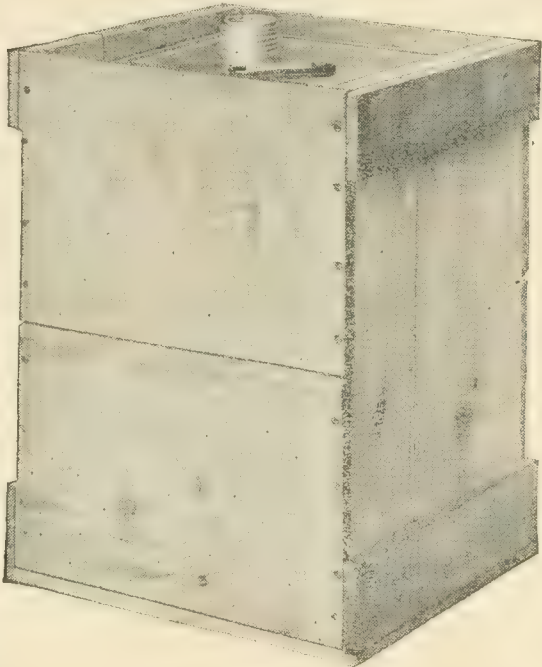
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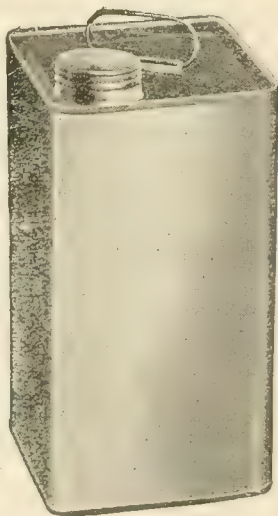
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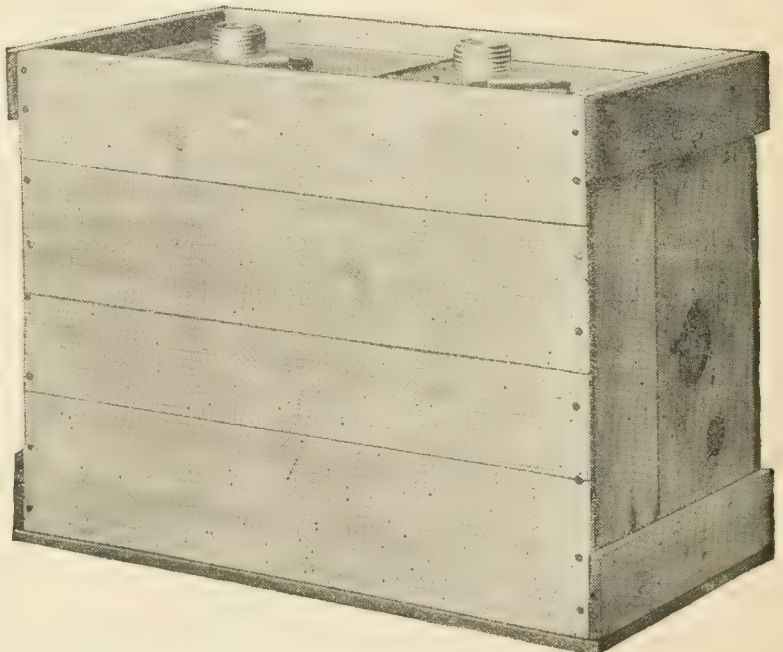
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3 lb. Can ..	3.00	2.35	28.00	
5 lb. Pail \$5.	4.75	4.50		
7 lb. Pail	7.	6.50	6.25	60.00

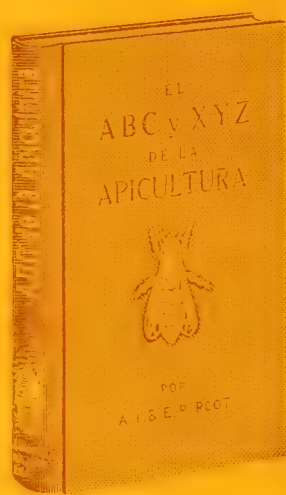
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The Beekeepers' Review

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The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo. PROF. EDWIN G. BALDWIN, Deland, Fla.

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Management of Three Thousand Colonies Bees in Fifty Yards

By J. J. WILDER, Cordele, Ga.

The Third Year's Work in the New Field--

Near the close of the second year work in the new field I bought some land and a cottage at O'Brien, Florida which was then headquarters in the new field and decided to spend the winters there and work at the new business. Well I did spend the most of the following winter there and give the business another good shove off by fixing up more supplies for increase and locating more apiary sites.

At the close of the second season I had some surplus cash after all returns had come in and early in the spring of the third year I bought 200 colonies bees in three yards down the railroad from mine about ten miles, and there I estab-

lished another branch of business and there I began to widen out, establishing apiaries around. I carried nearly 100 colonies bees from my O'Brien branch there and established two more yards making five yards in all. I placed a good man in charge and gave him half the honey he could make, but all increase was mine and for which I paid him 50c per colony for all increase he made. I furnished him nearly all the needed supplies set up ready for the increase. Well he made nearly 100 colonies increase and the same season he made 9,972 pounds of comb honey which netted us close to \$1000.00 which was \$500.00 apiece. This branch we call the Branford Branch. I got a good crop at O'Brien Branch and added two more apiaries there, making

eleven in all, consisting of 800 colonies of bees.

That fall we erected a small warehouse at the O'Brien Branch and put in a stock of bee supplies for the trade. Also the same fall I bought a gasoline engine and a No. 4 Barnes saw with all needed saws, cutter heads, etc. for making bee supplies and installed them at Cordele, Ga. for the purpose of making the most of the supplies I might need for the future of the business and bought a light car of Cypress boards dressed both sides out thirteen-sixteenths inches thick and as soon as the honey was removed and packed at the Cordele Branch and bees put up for winter I taught my apiarist how to cut out with the machine, comb honey supers and interior parts of same except separators, and gave him a

helper. And besides the supplies needed for the next season's business at Cordele Branch which consisted of bottoms, covers, bodies, frames and shallow extracting supers with frames, he cut out 1000 comb honey supers for the two new branches of business which were sent there and set up in readiness during the winter by the two apiarists in charge whom I visited several times during the winter and outlined the work to be done the previous year.

Well, this was a great year's work indeed and now my dreams seemed to be materializing and beekeeping was a real business such as it had long been my desire to make it and a profitable one too. While I did not have much money ahead I was able to make the business widen out.

Combating Foul Brood in Winter

ALLEN LATHAM, Norwich, Conn.

It will lead to an easy understanding of the contents of this article if a recent experience is related as an introduction.

The writer to suit his own needs and inclinations has developed a system of what it seems pertinent to describe as "Let Alone Beekeeping." To that end he devised some twelve years ago a hive which met all the requirements, in so far as the writer understood them, of the honeybee. The hive is an all-the-year-round hive, and the bees will not suffer if not seen for a whole year or for two whole years.

The last statement was practically true till foul-brood reached these let-alone apiaries. Then havoc came. The very fact that the hives were largely let alone led to the gradual increase of black blood. Hence the European disease found fertile soil. For a time at least the writer will have to vary his system which has wrought so well for him.

On January 2nd of the present year an apiary in Lancaster, Mass., was visited to garner the honey of the previous summer. The first two or three colonies showed nothing wrong, but when more colonies were

opened up the disease, European foul-brood, began to be in evidence. Little difficulty was encountered in discovering the disease. The frames were of the closed top-bar type and as the cluster of bees was approached unclean cells began to show. Here and there a capped cell. The comb drawn from the hive showed some dried down larvae, and the odor when the comb was pressed to the face became very apparent.

Three colonies were found which had succumbed entirely, though there was honey still in the hives, for the weather had not been tolerant to robbing. A fourth colony was found which was seriously affected and had too few bees to winter well. A fifth was found the combs of which had the odor, but appeared to the eyes as clean. This last colony showed good Italian traits and as there were a fair number of bees it was left for treatment (if necessary) in the spring. Everything, in the first four mentioned as diseased, which could in any way transmit the disease was burned.

Today that apiary is apparently

(Continued on page 470)

Getting an Education at Home

WESLEY FOSTER, Boulder, Colorado

Two ideas I find many young people have. The first is that they have got to go away to school to get an education. It is but an expression of the feeling we all have more or less that some place we have heard or read of is the "Eldorado" of our dreams. The idea has been the means of pushing young people out into a new environment, where the transplanted youth developed much more character and worth than would have been the case had he or she remained at home. This seems to be about the only benefit of the idea that where we now stand is less holy ground than some far off field of opportunity.

One can get a very good education right at home by applying the knowledge to be had in agricultural college bulletins and farm papers. The benefits of association which the college student has, can be secured by attending farmers' institutes, fairs, stock and poultry shows, etc. The real test of a youth is; does he want to excel in his chosen work? If desire is very much alive he will get there whether he has the advantages of college or not.

The second idea is that an education is something to get in four years and then it is finished. If the idea is held throughout the college course, when they have "finished" they feel as if they had something that other people in general have been deprived of. Education to me is but a bringing out of one's faculties and qualities so as to make

us efficient in the work we have to do.

The most valuable products of our colleges and agricultural schools are the young people who had to work their way through and during the summer vacations were applying the ideas gained in school.

What we need as a nation is the daily search for better methods and a wholesome fear of ruts. The college boy who works his way through generally will not stop with "good enough," he must have the very best. This idea is also becoming very common among the farmer boys who have not had high school and college advantages. The daily habit of learning something new and valuable will soon raise a farmer out of the mediocre into a person of distinction. When a whole community is made up of such people we have all that could be desired, except the making of the society of this kind to cover the earth.

The greatest need of rural education is the training of our farmer boys (and girls too) to sell their produce and get a large proportion of the consumer's dollar. This you might say cannot be done unless our farmer boys and girls go to the cities and attend business colleges and work in mercantile and produce houses. The fact is too many of our young people are going to the city, and instead of returning and helping solve the farm questions they stay in the city and work for some large firm where their individuality is crushed out.

The National Beekeepers' Association

Will hold its annual session at Denver, Colorado, some time during the month of February. The exact date and program will be announced later.

Denver being situated in the center of the producing country, and many of the largest producers of the country within easy reach,

we may well expect a meeting of "Live Wires." Present indications promise well for a big attendance. Come and "Get Together and Boost."

GEO. W. WILLIAMS, Sec.,
Redkey, Ind.

The Pearce Method of Beekeeping

J. A. PEARCE, Grand Rapids, Mich.

Mr. J. E. Pearce,
Grand Rapids, Mich.

Dear Sir:—

I wish you would explain in some of your future articles in the Review where and how you get your extra sets of combs so easily you mention in changing C. C. Comstock's bees.

You say you brought extra combs if it had been frames with foundation it would be easily, but combs with me are always scarce and hard to get a supply of. Of course putting frames foundation above a colony that is full of brood from side to side in fruit bloom would have little or no effect on swarming.

J. P. BRUMFIELD.

Galena, Kans., July 1st, 1914.

* * * *

R. R. 1, Grand Rapids, Michigan,
August 22, 1914.

In reply to Mr. J. P. Brumfield's letter of July 1st, about how I got these drawn combs so easily, that I supplied to Mr. Huntley Russell's bees on the C. C. Comstock farm. I will say that I got them from a lot of bees that were suffocated in a burning barn. Yes I agree with Mr. Brumfield that drawn combs are most valuable and hard to get, perhaps the easiest way to get them would be to let half or more of your bees die in the winter, but this would be not the cheapest way. But I will suggest a way that is good and reasonable in many ways for various reasons to get the best of combs. It is this. When you take off your white honey in July, place one or more hive bodies filled with good Hoffman frames wired and full sheets of foundations, one on each hive, and if honey is not coming in freely feed your bees by putting a ten pound honey pail with perforated lid filled with syrup or honey. invert this on the frames. An empty hive body is convenient to invert this in as a protection for it to keep all snug. At this time of year the bees are getting rid of drones and will build all worker comb and these combs will be first class. And at no other time can we secure such good combs with all worker

cells, as the bees are getting rid of their drones and will not build drone comb at this time of year. This is the best way to get combs I know of in a straight way.

The putting on of foundation early has about the same effect of preventing swarming as drawn combs as it gives plenty of room for the the queens provided that you put on honey cases early for the bees to carry the honey up into to give the queen room in the brood nest. But all of this should be done in a building as we recommend as they are too tall to be outside as they are liable to be blown over or away in severe storms, and the covering problem is easier. This I think will make the matter clear for Mr. Brumfield.

* * * *

Kohala, Hawaii, I. H.
July 27, 1914.

Mr. Joseph A. Pearce,
Grand Rapids, Mich.

Dear Sir:—

I have been trying to work your method of Beekeeping but fear I do not quite understand it, and therefore write you for enlightenment hence my reason for troubling you.

I use a 10 frame hive. I placed one hive body on top of the other with a zinc excluder between the bees and only recently been transferred to the bottom one. In about a month they swarmed. I hived the swarm in a new 10 frame hive, placed another 10 frame body on top with Queen Excluder between. Since then they have swarmed again, but had to return to the hive as I put a trap on the hive and the queen could not get out. I keep the trap on now all the time as I do not want them to swarm and fly away while I am not at home. They have plenty of room, and are working in the upper half. On one of the hives that seemed to be filling up I have placed another section holder so that it cannot be they need room. If they don't swarm under your system how does the queen get fertilized. I understood that if the

(Continued on page 467)

Field Notes from Tennessee

J. M. BUCHANAN Franklin, Tenn.

The past season has been a disappointment to the beekeepers in most parts of the state. What with dry weather, no white clover, and a lot of bad honey-dew, there has been very little good honey harvested. Wherever there was a good quantity of alsike clover, or sourwood, there has been some first-class honey stored. However, there has been a nice fall flow from aster, which has put the bees in fine condition for winter, so we are hoping for better things next year.

* * *

We will winter about two hundred colonies in two-story hives, with ten to twenty pounds of stores in the upper story, and the excluder removed. This plan proved very successful with us last winter, giving good strong colonies in the spring, and a very low percent of swarming. We finished extracting Nov. 4th., leaving each colony an average of 25 or 30 pounds of stores. This is dark honey, but with our open winters it will give about as good results as clover honey.

* * *

In view of the high price of

sugar, and the scarcity of white honey throughout the clover sections, the honey market should be firm this winter and the prices good. Although Tennessee ranks fifth in the United States in the point of honey production, we never raise enough honey for home consumption; so the question of finding a market for our product is one of secondary importance to our beekeepers.

* * *

Where there are only a few diseased colonies in a yard I don't think it pays to save anything but the hives, unless it is practicable to move the colonies to be treated to a location a mile or two from any other bees, where there will be no danger of robbing. The bees can be saved in such a "hospital yard," but I would burn all combs and frames, and scorch out the hives with a gasoline torch. It is almost impossible to treat affected colonies in a yard with other bees without exposing some diseased matter to robber bees, thus spreading the disease. An expert might do it, but not one average beekeeper in a dozen will be careful enough to make a success of such treatment.

Notes from Colorado

ROBERT E. FOSTER, Rifle, Colorado

A prominent beeman of this state advanced the idea of putting your hive of full sheets under the brood nest in the Spring, instead of on top. This is when a colony needs more room and you don't want to put on supers. The honey was coming from dandelion so we did not want it in the super.

I tried this plan out in good shape in one of our yards, and it was a failure. I put on about 20 bodies of full sheets and 7 of them I put under the brood nest. At the next trip, about a week later, I examined them and found all of

those on top were being drawn out, some of them were very near full drawn, while those under brood nest were not drawn at all, and some colonies where the full sheets were under were building comb in the covers. We were short on inner covers at this yard and had the Acme style cover so there was a space of an inch or so between the top of brood frames and the covers.

I think this shows that in our locality it does not pay to put your hives of full sheets under the brood nest.

Wesley Foster and I had some

talk about how long it took to fill a hive body with wired frames and full sheets of foundation. To find out I timed myself on seven hives. I first nailed all the frames for the seven and only timed myself on three of them. I found that I took 10 minutes for one hive full or 8 fr. I then wired the frames timing each group of eight, with the following result: 7½ min., 6 min., 8 min., 7 min., 7½ min., 7 min., 6½ min. or an average of 7 min. per hive. Then I put full sheets in and imbedded the wire with a spur wire embedder, time 8 min., 9 min., 8 min., 9 min., 9 min., 8 min., 7 min., or an average of 8 2-7 min. per hive. This makes a total average of 25 2-7 min. for filling one hive.

I then took five hives and timed filling the five, I was 126 min., 45 min. nailing, 39 min. wiring, 42 min. putting in foundation, or an average of 25 1-5 min.

I do not write this because I think I am the fastest at this work, but thought if others did it in less time I might find out their method of doing the work.

Some Expressions on Bees

The guards of a hive fly around in the air from 10 to 20 feet from the hive.

I had two hives of bees and my neighbor had quite a few hives, his bees came and carried my bees and honey all away. I know for I saw them come out of the hive with bees and fly away.

A bee kicked me and left his leg in me.

We fling all our honey, we don't raise comb honey

When anything is dead it is foul, so of course a dead bee is foul (foul brood).

If you mash a bee you will cause foul brood.

When I get around to it I am going to get a couple of bees so as to have honey for the family.

Mr. Supply Dealer, I want a dollar's worth of pound honey cells.

Foulbrood is caused from fruit spray.

This is to show what queer ideas some people have on bees.

Try the Review classified column.

EDITORIAL CORNER

The Yuletide season will be with you before another number of the Review. We take this opportunity to wish the readers of the Review a very enjoyable season and hope to meet you all (through the Review) the first of January, when our new volume begins. Will you ALL be with us!

A very complete index for volume XXVII will be found on page 456. This will help the reader wonderfully when looking up the valuable articles appearing in the Review during the year 1914.

* * *

Denver is the center of the largest bee business, from the producer standpoint in the world. It is predicted that this meeting will consist of more extensive beekeepers than any other National meeting thus far. You will surely be several

years behind your more fortunate brothers who attend, by not attending this great meeting.

* * *

Four Hundred Seventy-Eight Pages in the Review for 1914

The Review contains 478 pages for the year 1914. Who says they did not get their dollar's worth during 1914? Nearly five pages for a cent. Surely reading matter is cheap nowadays.

At one convention, those present were told that in feeding back honey to get part-full sections of comb honey completed, if they would uncap the sealed portion, the entire section would then be filled out even and nice and make a fancy article, instead of a poorly finished product, as usual. Lots of such

"kinks" will be dropped at the National in Denver next February. Will you be there to profit by the experience of others! It is a slow process, that of working out your own system, all alone. Most producers die before this is accomplished. Will you be one of them?

* * *

Were each one to send in a new subscriber for 1915, it would not take but little time and would be a "land-slide" for the Review. Can we expect this little from each?

* * *

It costs the Review nearly a hundred dollars a year to finance the National. This should not be so. A fee sufficient to cover all regular expenses should be levied upon each member.

* * *

Director Foster is "hustling" around Denver to make the 1915 meeting of the National a record breaker. Boulder is but thirty miles from Denver, so he is close by and the members can rest assured that no stone will be left unturned to make this meeting a hummer. Bring your neighbor beekeeper along with you.

* * *

IT IS NOT NECESSARY TO IMPORT MORE BREEDING QUEENS

Our breeders are now putting out the very best stock obtainable. We have a long list of breeders whose stock is much superior to the original imported, so why send to foreign countries and pay more for inferior stock.

* * *

The Michigan state branch of the National will meet in East Lansing, Dec. 9-10. You should attend this best of all conventions. You may gain information that will help you many dollars worth, in advanced ideas at this meet. Come out, bring the women folks and have a regular outing, you will not regret it!

* * *

The great NATIONAL meeting in Denver will be the biggest thing in bee-dom during 1915. Those who can possibly attend should do so. It is becoming more essential each year to post oneself upon the principles of modern production. We would call your attention to the fact that it is those who attend conventions

and read all the bee journals are among those who count their number of bees by the hundred or thousand swarms. Are you satisfied to lag in the rear! "Get in the swim!"

Honey Production in the Rocky Mountain Region

The honey crop report given in Bulletin Number 620 of the Department of Agriculture entitled "The Agricultural Outlook" is illuminating as regards honey production in the Inter-Mountain west.

Of the eleven Rocky Mountain states of Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon and California, Montana alone fell below an average crop of forty pounds in 1914. In 1913 California and Montana alone of all these states fell below 40 pounds average. None fell below 35 pounds while in the U. S. ten states fell below a 35 pound average. The average of the U. S. in 1913 was 40.6 pounds while the average for the eleven Rocky Mountain states was 55.5 pounds. In 1914 the average for the whole U. S. was 31.6 and in these eleven states was 57.5 pounds.

In 1913 24 states reported an average crop of forty pounds or more and 9 of them were Rocky Mountain states, all but two. In 1914 sixteen states reported crops of forty pounds or more and ten of them are Rocky Mountain states, all but one reporting forty pounds or more.

In 1914 eighteen states fell below an average of thirty pounds while none of the Rocky Mountain states have so small a crop.

The average crop in 1913 of the thirty-seven states not counting the Rocky Mountain states was 38.2 pounds compared with an average of 55.5 pounds for the Rocky Mountain states or about 50 per cent larger crop on the average.

In 1914 the average crop for the thirty-seven states was 27.2 pounds while the average crop for the Rocky Mountain states was 57.5 pounds, more than double the average.

There are two things about the larger crop of the west that discounts the attractiveness of the

proposition—Our supplies cost us more and we get less for our honey. The Rocky Mountain region is the land of the specialist, if this were not the case our average crop would be smaller.—W. F.

Denver, the great NATIONAL convention city for 1915.

You have been planning on an outing all these years. Now is your best opportunity. Attend the National convention in Denver next February. You will have the "time of your life."

Would you like to shake hands with many you have read about during the years past? Then turn out to the National convention at Denver next February.

Denver, the center of the great Alfalfa region of the central west and with a large crop of honey as an encouragement, will turn out the largest National convention in years. Will you be one of them to enjoy the pleasure and profit of this great meeting?

Wax Rendering Service Station

Massachusetts to help her beekeepers in the rendering of old comb.

A new service station for Massachusetts beekeepers has recently been announced by Dr. Burton N. Gates, Associate Professor of Beekeeping, Massachusetts Agricultural college. The college at Amherst has installed a steam operated equipment which is showing high percentage yields. For instance, one trial in rendering nineteen Langstroth combs, gave approximately six pounds of wax.

Already considerable quantities of comb have been rendered and arrangement is made for much more yet the capacity of the press is several hundred pounds a day. We suggest that those having work to be done write to Dr. Gates requesting this service, whereupon he will send full particulars and an application blank to be filled out and returned before the wax is shipped. Dr. Gates especially requests that beekeepers refrain from shipping materials previous to notifying him. It should also be emphasized that it is not desirable to furnish comb containing honey, not alone from the standpoint of leakage in trans-

portation, but because it hinders efficient rendering. The service is offered at a nominal cost merely covering expenses, a charge of five cents per pound of rendered product. The beekeeper, however, is expected to pay transportation charges which are slight.

We believe this idea of a central service station to be a step in the right direction toward the handling of apicultural products. Moreover from the success of this project already, we are certain that beekeepers appreciate the opportunity afforded them. Dr. Gates informs us also that from time to time as circumstances and facilities permit, the wax working operations will be improved and extended, not merely comb rendered into commercial wax but commercial wax clarified and prepared for various markets and their demands.

We would remind the beekeepers that there is a neat income from scraps of comb, scrapings and burr-comb. This margin is especially profitable when the toilsome and disagreeable work of rendering can be avoided at a slight expense. Consider also the short distance of transportation as well as the additional yield of wax possible in comparison with the small percentage obtained by the usual, laborious home process. Odds and ends of combs should no longer be used to feed the bee moths. "Save the pieces" and have them extracted at the central station.

We would suggest that old comb may best be stored by tamping it solidly into a tight barrel or box; the more compact and harder it is tamped the less likely bee moths are to injure it. Take a piece of two-by-four or other heavy tamp and pound down the scrap as it is thrown into the barrel. The bee moth will not trouble wax stored in this way, especially if the material is allowed to freeze once during the winter. It is surprising what an accumulation may be made even in a small apiary. In the larger apiary it will well repay the beekeeper to sort his comb into two grades bright and dark. Especially handsome wax is obtained from cappings or bright new comb. We commend the new service station to the attention of beekeepers. Savings in

wax will help meet your next year's foundation bill.

Expiration Notice

A great many subscriptions to the Review expire with this December number. We would like to have everybody renew and get their neighbor to subscribe with them. The Review is the Producers' own paper, owned and published by ourselves, so every one of us should have an interest in its growth. The more subscribers we have the better paper we can make you, for, we are not an organization for profit, so you can rest assured that we will give you in the Review every cent you pay for and usually much more.

The Review is now eight pages larger than when at its best during the late Mr. Hutchinson's management of it, and we stand ready to make it still larger just as soon as the support will warrant it. Will you do your part this month by sending in all the new subscribers possible? You can offer as an inducement, the last eight months of 1914 and ALL of 1915 for a dollar, where can you invest a dollar to a better advantage. Then we have some very low clubbing offers in this number. Show these to the prospective subscriber and tell him that he can take advantage of these low rates and also include the back numbers of the Review without extra charge. Surely with this great array of matter you will not have trouble in getting them to subscribe with you.

THE REVIEW NOT SENT LONGER THAN PAID FOR

While we would like very much to continue sending the REVIEW right along and collect the pay at the end of the year, it is thought best to stop at the time of expiration, as some would object to this method, then the postal authorities would also object to this plan, were it carried too far, so we have decided to stop the Review with this number to all who are only paid to the end of December.

If you should not have the money by you at this time, and are not behind for 1914 you can write this office to continue sending the Review and you will pay later and we will be pleased to continue sending

it. To sum up; it is our desire to send the Review to every person who wants it, and on the other hand we desire to stop the Review to those who for any reason do not care for it longer, in this way we hope to satisfy more of our subscribers than any other way we know of.

Remember that we do not want to lose a single one of you from our list next year, but we MUST hear from you in some way, or those who expire with this number will have to be dropped, as painful as it will be to us to do so.

An expiration blank will be enclosed with all whose subscriptions expire with this December number, and will you ALL kindly fill out said blank today, before you forget it and send it in. Of course we want you all to inclose the dollar, but if it is not convenient to do so at this time, you can make a cross in the circle marked "continue" and we will continue sending the Review as explained above. If for some reason you do not care for the Review longer, no attention need be taken to this notice, as your subscription will automatically discontinue. Address the BEE-KEEPERS' REVIEW, Northstar, Mich.

Colorado invites you to her honey producing center, Denver, next February. It may be years before the National will again meet among the Alfalfa producers. You should take advantage of this opportunity and attend this meeting.

Have you been close at home "sawing wood" all these years and not gotten out to attend a National convention? If you have, isn't it about time that you had a vacation? Let's all meet in Denver next February, a kind of a reunion, although several of us have never met, we know each other through correspondence, or other ways and this will be an opportunity to meet in person. Can we meet you there? Kindly drop us a card and let us know.

All eyes are now turned toward Denver.

Brawley, Calif., 10-9-'14

Editor Bee-Keepers' Review:—Your story about that association of dealers in beekeepers' supplies which was trying to kill the Review is very interesting, but it is incomplete. I think I voice the sentiment of every subscriber and member of the National in asking for the firm names of those sixteen dealers. We have a right to know who our foes are, as well as our friends.

I do not approve of your method of raising money to pay the Review debt. Calling for subscriptions is too much like begging, but I have an idea which may answer the same purpose and in any event the enclosed check will help some. I am so far away that I cannot profitably do much business through the National, but I did get a National engine which has given me excellent service throughout the past summer and the check for my co-operative discount on that purchase was just \$4.50. This was a direct saving which the National made me and I herewith return this amount. If others will do likewise either for past purchase, or those in the near future, the Review debt will probably be paid in short order and no one will really contribute anything.

Sincerely,
J. EDGAR ROSS.

Member Ross: We want to thank you for your kind words regarding the National and Review. It might not be out of place here to state that what thanks we get is about all anyone working for the National and Review are getting. Your humble servant, the Managing Editor has worked almost night and day, with not a cent of pay since January, answering thousands of letters, besides the work of getting out the Review, still, no one that we know of is complaining, only if we were sure our work was appreciated we would feel much better. No! Neither do we approve of paying for the Review by subscription, but what better could we do! No one seemed to be in a position to suggest any way out, so the Managing Editor took it upon himself to raise what money he could by subscription. If it turns out a failure I will take all the blame and if a suc-

cess (as it now looks it would be) we hope for just a little credit for making the effort. We also want to thank you for your liberal donation of the \$4.50 you received as a rebate on the National engine we sold you. We are also glad you are pleased with the engine. There is nothing small or cheap about the engine, except the price we are selling it for. We know for we are using one ourselves. For a list of those who have withdrawn their support from our advertising pages, we refer you to a current number of the Review.—Ed.

We expect to be able to announce in the January number of the Review the date of our February National meeting in Denver. Watch for this announcement.

Do not forget that the Michigan branch of the National hold their annual meeting in East Lansing, December 9-10th. This is always one of the very best and profitable meetings in beedom. You should attend if you live in Michigan. For program and further particulars, address President J. E. Morse, 323 Genesee Ave., Saginaw, Michigan.

We quote in part from a member in Ohio who says she is a beginner with bees but hopes to have more bees in the near future. We quote as follows: "Kindly give me information regarding the location of bee yard, distance from road and rules regarding protection as regards fences for raising flight of bees from disturbing people." Answer: We do not think there is any rule, or law relative to how far bees should be from highways, or what protection people as passersby have regarding stings from bees. If your property does people damage, you would be liable for it. A few bees can be kept in town, or near neighbors, without their bothering much if any, but as your yard grows, as you propose and the flying force gets heavy, you will likely wish you and your bees were located in some quiet nook, away from near neighbors and passersby. Were we locating a yard of bees near a neighbor, or highway, we would try and get

the bees as far from said neighbors and highways as possible. Then it will help some if you place the hive's entrance away from passersby. Many times the entrance guards see people or teams moving by, and it so irritates them that they are enticed away from the hive and attack people as a result, thus the object of having their entrance facing the opposite way when possible. Then it is the writer's opinion that bees will fly higher and be less liable to come in contact with people when they take the flight the opposite way from their flight to the field. In other words, the bee gets higher up in a given space when starting to the field, when it has to raise up and fly back over the hive. A tight fence (it may be of boards or shrubbery) is a great help in protecting passersby, and it cannot be too high, for the higher the bees are started off on their journey for honey and pollen, the less liable they are to come in contact with people. It is a prevailing idea among many that most states have a law prescribing the distance bees should be kept from highways. Such a law would not be sustained in any court, but thrown out as unconstitutional. What would you think of a legislator who would advocate

a law prohibiting you pasturing your cow nearer than ten rods of the highway, providing she has horns. It is a parallel case.—Ed.

When sending in your renewal this month kindly ask your neighbor to subscribe with you. As an encouragement for him to subscribe for the Review during 1915, you can promise him the last eight months of 1914, as an inducement. Surely you should have no trouble in getting him to subscribe with this liberal inducement. It is your Review and every subscriber sent makes it possible to put out a better paper.

The Review Half Paid For

The Review cost us \$1000 and is considered cheap by those who know, at the price. On January 1st, we will pay \$200 and interest on this debt, this much being subscribed during the last few months. As we now owe \$700, this will leave \$500 that we still owe, making the Review half paid for. As many have expressed a desire to contribute toward this fund later, we have decided to accept donations to this fund during 1915.

The Secretary's Corner

GEO. W. WILLIAMS, Redkey, Ind.

Well, we had a splendid meeting at the Indiana Association although the attendance could and would have been larger if the notice had been given longer. In discussing the proposed changes to the National Constitution, a vote was taken to see just how the Review stood in the estimation of the members. How many do you think wished to drop it? NOT A SINGLE ONE. Who said the people wanted to drop it?

The little honey dish seems to find favor. The first order came all the way from California, and wanted the special mark, hive, bee or something to make it a honey dish in fact as well as in name. I will say again that this will come in time, but as it costs a whole lot to make

the moulds, we will have to use a great many first. We can have labels printed, however, and paste them on, and it will answer in a way. The neighbors up the street where they have the dishes are still asking for honey to put in them, although I am sold out. I will buy some and furnish it so they can use the dishes.

We had a little discussion at the State meeting on the ASTER ERICOIDES that is getting so plentiful in sections of Southern and central Indiana. Mr. Erbaugh was of the opinion that it was spreading rapidly with the winds, and drifting in a northeast direction. There was some objection to the honey if it was not properly ripened, as a

winter food. There has been no trouble here for several years and I have not had to feed a pound of sugar since it has got thoroughly started. It gives me the case full almost every fall, but it is not very salable, and I leave it on, for spring stimulation.

It saves a lot of "fussing" with the bees in a time when they would be liable to rob if disturbed, both in the spring and fall. It is fine for us here, sure.

Now for a general move to increase the circulation of the Review. Have you seen the splendid arrangements with the other journals, and back number offer? I am going to make another special offer in addition to this. I have gathered a whole lot of seed from the ASTER ERUCOIDES and will put it in little bags, holding about what I paid 25c for when I started to sow it, and I will give one of these to each member who sends a new subscriber or renewal with his own renewal that comes to me. If you send it direct to the office they might neglect to speak about it I have enough for several hundred bags and I would like to have several hundred beekeepers "go in" to the aster business. If you have to feed in the fall, it will surely pay you to look into it. I have no seed to sell, at all, and am doing this as my little mite toward pushing the Review.

Well, while the National Ass'n has been trying to make up its mind how to "boost" honey for the whole membership, a firm who "do things," has quietly gone to work and started a selling campaign that is a "hummer." They are selling honey by the carload I understand, and doing it along the lines that are available to any of us—Live bee and honey demonstrations, and local advertising. I do not grudge them their success, as they have earned it. But I do want to see more of the beekeepers themselves go to selling honey this way, and keep boosting it everywhere, and all the time. This firm is now pushing the sales of honey in several of the big cities, and in a few years will cover a great deal more territory. I wonder how many of us realize the opportunity to make not only a living, but a good income be-

sides, of selling honey at retail in the business places, markets, department stores, and routes in the cities and towns. I am not at all favorable to the National buying and selling honey as a jobber, but I am sure that it is in a position to help the producer get better prices, and not touch the honey either in a commercial way. As it is, the ones who are selling their honey to these "live wires" are losing the profit. Just as well have part of that yourself.

I heard quite a compliment passed on the Review the other day, and it was given in a way that shows how it is helping some of those who use it to sell their honey. He was a buyer, and remarked that he had written to a number of those who had placed their names in the free lists. He said that they must surely have a better market than he could afford, as the price asked was about two cents higher than he wanted to pay. And he said that they must surely find some suckers to buy their honey, as several wrote that they were sold out. He bought his honey of a man who did not believe in "spending his money to keep up any fool association" FOR 3c LESS than he could get it from any of the members. He bought several thousand pounds, at that: Pretty expensive to NOT belong and keep posted?

What are we going to make out of the National, anyway? Are we going to keep it up just to keep a place for the good looking fellows, (myself for instance) to stand around and look pretty, and keep out any taint of commercialism, and force the real producers to look elsewhere for aid in selling their honey, or shall we arrange to give this aid through the influence of the Association? Let us stop and get down "to brass tacks" as the boys say. The association has members in all parts of the country, and of all shades of interest in the honey business. I will roughly estimate and analyze the proportions as well as I can, approximately as follows.

Members whose vocation is manufacturing supplies and hives, 2-5 of one per cent.

Members who sell honey as a vocation, 1-10 of 1 per cent.

(Continued on page 464)

The National Bee-Keepers' Association

And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
.....Amherst, Mass.
FRANK C. PELLETT, Vice-Pres....
.....Atlantic, Iowa
GEORGE W. WILLIAMS Sec.-Treas-
urer.....Redkey, Ind.

Directors

DR. BURTON N. GATES, Chairman
.....Amherst, Mass.
E. D. TOWNSEND....Northstar, Mich.
J. M. BUCHANAN.....Franklin, Tenn.
WESLEY FOSTER.....Boulder, Colo.
GEORGE W. WILLIAMS..Redkey, Ind.
E. G. CARR.....New Egypt, N. J.

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
.....G. M. Frizzell Temple Ariz.
ADIRONDACK—H. E. Gray.....
.....Fort Edward, N. Y.
COLORADO—Wesley Foster.....
.....Boulder, Colo.
CHICAGO-NORTHWESTERN—L. C.
Dadant.....Hamilton, Ill.
HAMPSHIRE—HAMPDEN—FRANKLIN
Dr. Burton N. Gates.....
.....Amherst, Mass.
IDAHO—R. D. Bradshaw, Notus, Ida.
TWIN FALLS—C. H. Stinson.....
.....Twin Falls, Ida.
IDAHO HONEY PRODUCERS' ASS'N—
F. C. Bowman.....Idaho Falls
ILLINOIS—Jas. A. Stone.....
.....Rt. 4 Springfield, Ill.
INDIANA—Geo. W. Williams.....
.....Redkey, Ind.
IOWA—S. W. Snyder, Center Point, Ia.
KANSAS—O. A. Keen, Topeka, Kans.
MASS. EASTERN SOCIETY OF
BEE-KEEPERS.....
Leslie A. M. Stewart, Franklin, Mass.
MICHIGAN—O. H. Schmidt.....
.....Rt. 5, Bay City Mich.
MINNESOTA—Dr. L. D. Leonard....
515 Syndicate Bldg., Minneapolis, Minn.
MISSOURI—J. F. Diemer..Liberty, Mo.

NEW JERSEY—E. G. Carr.....
.....New Egypt, N. J.
N. CALIFORNIA—Alwin P. Heim..
16, Fair Oaks, Calif.
N. MICHIGAN—Ira D. Bartlett....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola Ohio.
OREGON—Floyd E. Smith, Dallads, Ore.
THE NEW MEXICO BRANCH—
Henry C. Barron, Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger...
.....Liverpool, Pa.
PUERTO RICO—J. W. Van Leenhoff
Ponce, Puerto Rico, 11 Marina, St.
SOUTH IDAHO AND EAST OREGON—
R. D. Bradshaw.....Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—H. E. Graham, Gause, Texas.
VERMONT—P. E. Crane.....
.....Middlebury, Vt.
VINTON BEE-KEEPERS' ASS'N—..
.....E. J. Winder, Vernal, Utah.
WASHINGTON—J. B. Ramage.....
.....Rt. 2, N. Yakima, Wash.
WISCONSIN—Gus Dittmer....
.....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

All eyes are now turned towards Denver.

Twelfth Annual Convention of the Missouri Beekeepers' Asso'n

The twelfth annual convention of the Missouri Beekeepers' Association will be held in Commercial Club rooms, 12th floor Corby-Forsee Bldg., St. Joseph, Mo. December 7th and 8th, 1914. The program of the above convention came too late for the December Review, or we would have been pleased to have published it in full. For a program and full particulars, write to Secretary J. F. Diemer, Liberty, Mo. Secretary Diemer writes "We are going to have the best meeting we ever had. Wish you could be there." So do I Friend Diemer, for it would give me much pleasure to meet you at home in your own

convention rooms after meeting you in St. Louis last February, for, when one is acquainted, it does not seem like going away from home, but think it will be better for me to stay here at the office and work, rather than go "gadding about" so much when there is so much needing to be done here at the present time. We hope you will have a good turn-out and a profitable meeting.

Bagnall, Mich.

Editor Review:—Find enclosed one dollar for continuance of my subscription to the Review. You may discontinue my advertisement of honey for sale in your list, as I am all sold out and more orders coming in that I can't fill.

Yours respectfully,

C. J. FREEMAN.

Some Arrangements for the National Meeting at Denver in Feb.

Boulder, Colo., Oct. 30, 1914
Dr. Burton N. Gates,
Amherst, Mass.

Dear Mr. Gates:—

Yours of Oct. 20 is at hand. I have selected Mr. N. L. Henthorne, Platteville, Colo. President of the Colorado State Association, and Mr. L. F. Jouno, 3350 Osceola, Denver, to serve with myself as a committee of local arrangements. If either of these cannot serve, I would like to have Mr. D. W. Working, with the Bureau of Farm Management, Denver, serve. Mr. Working was formerly secretary of our state association.

I think we should have a three days' meeting and the auditorium Hotel, Denver, will probably be the meeting place. The rates at this hotel are \$1 per day and up, \$1.50 a day, I believe, where two occupy a room. I hardly think there will be any rates on during February.

The Convention room of the hotel is well adapted for exhibit space. We will have a banquet and if the weather permits we can take an auto trip to some nearby apiaries.

I would like to arrange one or more meetings in eastern Colorado. One at Rocky Ford and another probably at Sterling so that those who came to the convention from the east could arrange to stop off and hold a preliminary meeting to stir up interest in the convention in Denver. If yourself and Dr. Phillips could come to Colorado ten days before the convention we could hold a number of local meetings throughout the state and probably stir up considerable interest.

I will inform you in a few days definitely about hotel and rates and also whether there will be any railroad rates in effect.

Yours very truly,
WESLEY FOSTER, Director.

California Apiculture Up and Down to Date

Given at the National Convention, St. Louis, February 1914, by J. D. Bixby, Editor Western Honey Bee, Covina, California

The apiarist who comes to California from the east comes to a new world—one in which the business of honey production must be re-learned. Problems await him which are entirely unforeseen, and which convince him that he has reached the "land of contrarities," where they raise oranges just over the fence from snow banks; where it turns cold to rain; where the toads are green, the frogs are brown, and where the robins wear their red aprons under their tails.

He is confronted by the wintering question—and finds his bees perhaps storing more honey in winter from eucalyptus and lemon than they did in summer from sage. He thinks, of course, there is nothing for bees to do but store honey during the long, beautiful summer—and finds them starving in October, never realizing that it takes four times as much honey to carry a colony from June to November here as it does from October to May in the east. He sees orange trees

dripping with nectar in March, and straightway rushes to secure a fortune—only to find that a weak force of field bees, long nights and cool, foggy mornings have defeated his efforts.

Perhaps he goes north to Sacramento and finds ample scope for his craft in an undeveloped territory, where his best honey is gathered in mid-winter from manzanita, and the heavy flow of early summer is dark colored and low priced. There are many localities in the state like this, which are suitable only for bee and queen-raising, by reason of having little or no white honey producing flora.

Possibly he locates in one of the great interior valleys, where vast areas are overflowed each year and bees must be placed on high platforms each fall, to be safe from high water, which overflow produces regular and heavy crops of beautiful white honey from carpet grass, and light amber from alfalfa.

He may settle in one of the very dry alfalfa growing regions near the desert.

—only to find that he can produce nothing but comb honey, even the nectar from the fields being so thick and waxy that it tears the extracting combs to pieces, and winds about the extractor reel like threads. Or he may locate "South of the Tehachipi" in the sage districts, only to find that he must move his bees down near the coast to the lima-bean fields to insure his annual crop—for alas! the sage, that wonderful producer of magnificent honey, is as coquettish and uncertain as a woman. One fair crop in three is hardly an average, while it is a fact that in 30 years there have been but two successive good crops.

But we have *bees* in California—588,000 colonies of them, and our average eastern shipments are 500 carloads of honey per year. A steady increase in the sales of bee supplies is a good indication of the growth of the industry. The annual sales of one Los Angeles supply house were \$46,000 in 1910, \$44,000 in 1911, \$51,000 in 1912. A total failure throughout the sage districts in 1913 caused the sales to drop to \$34,000.

Many apiarists run from 2,000 to \$4,000 colonies each, producing carloads of honey. One man—only a part of whose interests are in California, however, produced 300,000 lbs. of honey in 1912, and over 275,000 lbs. in 1913.

Queen rearing has developed immensely, and we have several breeders who rank among the best in the world and sell thousands of queens annually. For some years one of our queen breed-

ers has furnished the queens for all the Government Experiment Stations.

Another special line of work is in the making of increase by division. Many thousand colonies are brought into southern California every fall from Utah and Idaho, built up during the honey flow from orange bloom, divided, and shipped back by June 1st in time to take advantage of the full season's surplus flow in the more northern states.

Here is the record for 1913—a very poor season—of one young man in this special line of work: Purchased 154 colonies of common hybrids in April; increased to 629 colonies by division, raising the Italian queens for the increase. Also took 38 cans, 60 lbs. each, of fine orange honey, that sold for 9 cents per lb.; June 1st loaded 629 five-frame nuclei to ship to Utah, 500 miles; delayed on road, so bees were confined 9 days in all; lost 6 colonies outright and many bees. In July, a break in an irrigation ditch flooded one yard; forced to move to higher ground; lost two colonies drowned and all the old bees, but took all told 395 cans of extracted honey, and left bees in fine shape for winter. Cash sales of honey over \$1,600.

The State Bee-Keepers' Association has been a potent factor in the development of the industry. It has caused the forming of many local and county affiliated associations; has aided largely in keeping the market price of honey at a reasonable figure; has been

(Continued on page 466)

The Chicago Northwestern Beekeepers' Association

The eighteenth annual meeting of the Chicago Northwestern Beekeepers' Association will be held at the Great Northern Hotel Friday and Thursday, December 17 and 18. An extensive program has been arranged, and as several large beekeepers, such as N. E. France, E. S. Miller and others have signified their intention of being present, a good meeting is assured. The program follows:

Thursday, December 17

- 9 a. m.—Social Hour.
- 10 a. m.—President's address, C. F. Kannenburg.
- 10:30 a. m.—Reading of Minutes and report of Secretary-Treasurer.
- 11 a. m.—American Bee-Keeping

Past and Future, L. A. Aspinwall.
Crop Reports.

Afternoon Session

- 1 p. m.—Shipping Bees North and South, H. C. Ahlers.
- 2 p. m.—Country Wide Advertising to Increase the Sale of Honey.
- 3 p. m.—Report of Delegate to National convention, E. J. Baxter.
- 4 p. m.—Bee Cellars, E. S. Miller.

Question box.

Thursday Evening Session

Sweet Clover, Prof. J. G. Mosier, University of Illinois.

Friday, December 18

- 9 a. m.—Social Hour.
- 10 a. m.—The High Price of

Sugar and the Honey Market, F. C. Pellett.

11 a. m.—The Foulbrood Problem, N. E. France.

Afternoon Session

1 p. m.—Social Hour.

2:30 p. m.—Brood Rearing for Crop Results, E. L. Hofman.

3:30 p. m.—Comb Honey—Preparing for the Crop, A. L. Kildow.

4 p. m.—Beekeeping as a Business, E. H. Bruner.

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National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured, or patched up sections; sections weighing less than ten ounces.

DENVER—Demand for well graded Comb Honey has been very good and we are pretty well cleaned up. Our Jobbing prices are \$3.00 per case for number one white. \$2.85 for choice and \$2.70 for number two.

Jobbing prices on extracted honey are now 8½c, 9c for white, 7½c, 8¼c for light amber. Beeswax, we pay 30c per pound in cash and 32c in trade for clean yellow, delivered here.

The Colorado Honey Producers' Assn.
F. RAUCHFUSS, Mgr.

CHICAGO—Comb honey is firmly held, all grades selling fairly well. The choice to fancy grades bringing 16c to 17c per lb. where the wood attached to the comb is allowed for. The amber grades range from 1c to 3c per lb. less. There is no surplus of desirable grades up to the present time.

Extracted white clover, linden and water white sage sells at 9c per lb. to 10c. with other white grades ranging from 7c to 8c per lb. Ambers of fine flavor 7c to 8c per lb. with the less desirable grades and flavors from 5c to

6c per lb. Beeswax 31c to 33c per lb.

Yours truly,
R. A. BURNETT & CO.,
173 W. South Water St.
Nov. 19.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

James T. Johnson, R. F. D. No. 1, Percy, Ill.

Henry J. Zinn, 1135 Who. Ave., Forty Fort, Pa.

Rocky Mountain Bee Co., Forsythe, Montana

H. H. Thale, Maywood, Mo.

E. S. Smith, Westville, Ind.

The Bee-Keepers' Review:—Well my bees are standing it fine this winter, as it has been so warm most of the time that one can go out doors without any coat on. I have been here for thirty years and never saw a winter like this before. The bees had six different flies this month already. Most of the winters in this country they don't get that chance in January. I winter part of my bees in the cellar and part out doors in Chaff hives of my own make. I never lose any in Chaff hives. I wintered bees in these hives twenty-five years. Now I work my bees for extracted honey so I don't have much swarming. I also requeen every year and make sure that I have a good queen in every colony in the yard. That is what makes strong colonies, and that is what it takes to make honey.

The bees like to have their honey up stairs and cluster down stairs on dry comb, or comb with no honey in, that is easy to keep warm. A good many will say, "How are we going to fix them up that way?" All easy if you know how. Take one hive full of dry comb and another hive full of honey. Now set your hive with your honey in on

top, and your dry combs below, and you have it. The next thing you want is a strong colony of bees and, also, a good queen. The bees should be young and also the queen. Now take off the wooden cover and in its place put a piece of grain bag just big enough to cover the top of the hive, now set it in your winter case. There should be a three inch space all around for packing and eight inches on top. Be sure and have a good big entrance. Be sure and have it small enough one way so no mice can get in. If you fix your colonies up in this way they will be good and strong in the spring.

Well to sum it all up there are all kinds of sides to beekeeping—The beekeeper's side, the honey side and market side, the right side and wrong side, the bright side and dark side, the inside and outside, the fat side and lean side, the good side and bad side, the quick side and slow side, the hind side and front side, the north side and south side, the east side and west side, the queen side and bees side.

Yours very truly,

OTTO BANKER.

Notice to Secretaries

During 1913 some of our most energetic Secretaries sent in over 40 subscribers to the REVIEW, for which we are very thankful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1914 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1914, a year's subscription to the REVIEW for 1915. The list to date stands as follows:

James A. Stone, Illinois.....	121
P. R. King, Ohio.....	34
H. E. Graham, Gause, Texas..	25
Gus Dittmer, Wisconsin.....	23

Geo. W. Williams, Indiana...	23
L. T. Rogers, Shreveport, La.	21
E. G. Carr, New Jersey.....	17
J. S. Whittemore, Massachusetts.....	17
H. E. Gray, New York.....	16
E. J. Winder, Utah.....	15
P. E. Crane, Vermont.....	15
S. W. Snyder, Iowa.....	15
Dr. L. D. Leonard, Minnesota	11
B. N. Gates, Massachusetts...	10
Floyd E. Smith, Dallad, Ore..	10
Henry C. Barron, New Mexico	8
J. W. VanLeenhoff, Puerto Rico.....	7
C. H. Stinson, Idaho.....	7
O. H. Schmidt, Michigan.....	3
J. F. Diemer, Missouri.....	3
L. C. Dadant, Chicago, Northwestern.....	3
Alwin P. Heim, California.....	2
F. C. Bowman, Idaho.....	2
R. D. Bradshaw, Notus, Ida..	2
J. B. Ramage, N. Yakima, Wash.	3
H. C. Klinger, Liverpool, Pa..	1
J. M. Buchanan, Franklin, Tenn	1

National Members Having Honey for Sale

We are herewith submitting a list of members having honey for sale. This list only includes those who have more honey than their home market will consume. The member's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free for the use of the members, and those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a member is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzl, Lincoln, Ill.

HORSEMINT

Wilmon Newel, College Station, Tex.

Alfred L. Harlt, Elmendorf, Texas.

A. L. Krueger, New Ulm, Texas.

H. E. Graham, Gause, Texas.

H. D. Murry, Mathis, Texas.

RASPBERRY

C. J. Freeman, Bagnall, Mich.

O. H. Townsend, Butterfield, Mich.

F. D. Stephens, Box 383, West Branch, Mich.

F. C. Hutchins, Santa Clara, N. Y.

ALFALFA

J. H. Stoneman, Blackfoot, Idaho.

A. A. Lyons, Fort Collins, Colo.

Chas. H. Hanney, Lander, Wyo.

Webber Bros., Rt. 2, Blackfoot, Idaho.

J. Edgar Ross, Brawley, Cal.

Jno. J. Glenn, Route No. 4, Buhl, Idaho.

H. Trickey, Box 383, Reno, Nev.

W. H. Pennington, Ontario, Ore.

Alfred Powell, Vernal, Utah.

Wesley Foster, Boulder, Colorado.

Bruce Baldwin, Durango, Colo.

Idaho Honey Producers' Association, Idaho Falls, Idaho.

T. H. Waale, Nampa, Idaho.

Arizona Honey Exchange, Tampe, Arizona.

C. Stimson, No. 1, Holly, Colo.

AMBER

E. F. Smith, Chadwick, Ill.

J. Edgar Ross, Brawley, Cal.

G. Frank Pease, Shreveport, La.

A. D. Herold, Box 186, Sonora, Cal.

R. A. McKae, Velasco, Texas.

A. H. Fralick, Homer, Minn.

LaGrand LaRow, Mercedes, Texas.

Quirin-The-Queen-Breeder, Bellevue, O.

Thos. Worthington, Leota Landing, Miss.

Latshaw Honey Co., Carlisle, Ind.

O. P. Hendrix, West Point, Miss.

J. M. Cutts, R. 1, Montgomery, Ala.

A. L. Krueger, New Ulm, Texas.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.

N. E. France, Platteville, Wis.

F. Gobeli, Glenwood City, Wis.

Frank Kittenger, Rt. 11, Franksville, Wis.

C. D. Townsend, Stockbridge, Mich.

E. D. Townsend & Sons, Northstar, Mich.

Frank Kittinger, Caledonia, Wis.

W. H. Townsend, Hubbardston, Mich.

B. A. Aldrach, Smithland, Iowa.

E. Woodall, Goodman, Wis.

A. F. Roska, R. No. 2, Swartz Creek, Mich.

E. H. Canfield, Carson City, Mich.

F. W. Lesser, E. Syracuse, N. Y.

WHITE CLOVER

E. F. Smith, Chadwick, Ill.

R. C. Zeader,

E. B. Rosa, Monroe, Wis.

F. M. Dittmer, Augusta, Wis.

B. F. Schmidt, North Buena Vista, Ia.

N. O. Walker, Franklin, Tenn.

E. D. Lerch, Morrisonville, Dane Co., Wis., No. 19.

Byron S. Hastings, Rt. 5, Brookville, Ind.

C. J. Oldenberg, Belle Plains, Minn.

J. H. Allemier, Delphos, Ohio.

C. J. Barber, Smithland, Iowa.

C. L. Pinney, LeMars, Iowa.

A. S. Crotzer, Lena, Ill.

W. H. Pearson, Mitchellville, Iowa.

M. H. Lind, Baders, Ill.

Wm. Fox, Withee, Wis.

Wm. E. Prish, Mineral Point, Wis.

Quirin-The-Queen-Breeder, Bellevue, O.

Niels A. Nelson, Dike, Iowa.

Geo. E. Capwell, Cottonwood Falls, Kan.

A. H. Fralick, Homer, Minn.

Joseph Kurth, Mineral Point, Wis.

Dell E. Berryman, 2308 20th ave., Central City, Nebr.

Geo. W. Woodhull, Kinde, Mich.

Wm. E. Dailey, R. 3, Woodsock, Ill.

E. A. Duax, Chippewa Falls, Wis.

ORANGE

James McKee, 559 Grand Ave., Riverside, Calif.

BUCKWHEAT

N. L. Stevens, Route No. 18, Venice Center, N. Y.

Jas. McNeil, Hudson, N. Y.

C. H. Burrows, Oran, N. Y.

Wilmer Clarke, Eastville, N. Y.

HWAJILLA

Frank Talbot, Pearsall, Texas.

SAGE

George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.

R. J. Krause, Dehesa, Calif.

Advertise it in the Review classified department.

Plum City, Wis., Aug. 1st, 1914
The Beekeepers' Review:—Glad to see the yellow cover appear again. Hope it will continue.

This has been a rather poor year here. Cold and rainy, then it turned hot and dry. We had plenty of bees ready for work, but they just about held their own until July. Will get between 30 and 40 pounds of extracted honey per colony, spring count.

Yours very truly,
F. C. SMITH.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS — Lowest price.
PEARL CARD CO., Clintonville, Conn.

White Clover honey for sale. Albert Tien, Falmouth, Mich

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind. tf

BEESWAX WANTED—Will pay 32c and Freight or 33c Trade. Send for prices on Bee supplies. W. D. SOPER, Jackson, Mich.

FOR SALE—Extracted clover honey thoroughly ripened and of fine quality. Put up in new cans two in one case. JOS. HANKE, Pt. Washington, Wisc.

FOR SALE—Orange honey, 1914 crop. Packed in 60-lb. cans, 2 in a case, net weight. Price 9c per lb. Sample free. JAMES McKEE, 559 Grand ave., Riverside, Calif.

WANTED—Extracted honey, car lots or less. Alfalfa or Alfalfa and Sweet Clover mixed. Could use some from other sources. W. HICKOX, Forsyth, Mont.

COMB HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We will pay 32c per pound for nice, clean, bright yellow Beeswax. Chas. Israel Bros. Co., 486 Canal St., New York. Established in 1875.

A Season with Bees in the South

G. Frank Pease, Marshall, Mich.

President La. B. K. A.

Although my bees in Louisiana were left heavy in stores in September 1913, some having from forty to fifty pounds, I found on my arrival there from Michigan the first of January that the warm winter had caused heavy brood rearing and used nearly all the honey throughout the apiary. I arrived just in time to save them. About two hundred were still in old heavy pine hives so their weight deceived me and one apiary lost about fifteen swarms.

The yard where we first camped I began transferring and feeding. I began transferring in January and by the latter part of February a big share of them were transferred in ten frame Hoffman hives. Although there were some light frosts at night and a few light freezing spells, with little or no brood or pollen and no drones, I did not lose but one queen and lost only one swarm (after feeding) from robbing in an out apiary. The fifteen swarms that starved, died before I could get to them in an out apiary.

I built a screen tent to transfer in and had to handle the swarms very quickly as robbers were on the job every chance they got.

The spring was backward but opened up with button willow and rattan and starvation was at an end.

Swarms built up under manipulation to an average of fourteen Hoffman frames of brood and one swarm had twenty-four frames of brood and another frame partly full.

My comb honey was built over two ten frame hives and one swarm finished a 32 sec. super over three ten frame hives. July is supposed to be the best honey month in my location but this year they went back in stores during July cutting my crop short 57 lbs. per colony spring count and 200 swarms increase.

My conclusion of keeping bees in the south is this:

Put comb honey supers above double 10 frame brood nest on account of the need of so much brood room and to stop swarming.

Keep all surplus combs on swarms through winter on account of moth worms.

Give plenty of ventilation winter and summer and look out for robbing at all times of the year.

Death of T. F. Bingham of Smoker Fame

We are pained to announce another oldtime Michigan man's death in that of Mr. T. F. Bingham. Heddon, Hilton, Hutchinson, Taylor and now Bingham. Names that have made Michigan famous in the past. Names that by their living have made the world better. Names that will go down in history as men who did not live entirely for themselves, but loved their fellow man better than dollars and cents. Men who never lost an opportunity to help some struggling brother over some rough place at every opportunity. It is a list of nobility that Michigan and the world may be proud of.

Mr. Bingham was born Jan. 22, 1830, in Woodstock, Vt. and was therefore 84 years old at his death, which occurred in Sugar City, Colorado on August 2nd. There he has lived with a daughter who holds large interests in a sugar ranch, since selling out his smoker business. He was some past eighty years old at death, exact date lacking. During the period the Bingham smoker factories were at Alma, Mich. the writer had the pleasure of calling on Mr. Bingham many times, both at the factory and at the residence. One always found him the same genial business man, always ready to make ones stay a source of pleasure, seemingly not thinking of what it was costing him in strength during his declining years. Rheumatism was his ailment during the last few years. At first we would always find him at the shop. Then later visits would find him at home a part of the time, until the last year of his residence in Alma, we found him at his home. Rheumatism confined him to the house for the last four years of his life. Mrs. Bingham still resides with her daughter at Sugar City, Colorado.

Read our Clubbing rates.

FOR SALE—One car Alfalfa extracted honey. Address W. H. Pennington, Ontario, Ore.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—Fine well ripened white clover honey in 60 pound cans, also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—50,000 pounds light extracted honey, well ripened and mild flavored. Two sixty pound cans to case, 7½ cents by the case, in ten case lots, even seven cents per pound in fifty case lots. Write H. G. QUIRIN, Bellevue Ohio.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIREES, North Yakima, Wash.

FOR SALE—1000 colonies of bees in 10 frame hives. Located in 10 apiaries in the Imperial Valley, where crop failure is unknown. Profits for five years, have averaged more than 100 per cent annually. Owner retiring from active business. J. Edgar Ross, Brawley, Calif.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys this superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

CALIFORNIA ORANGE BLOSSOM HONEY—Extra fancy, at 9c. Safe arrival guaranteed. Sample free. **JAMES McKEE**, Riverside, Calif.

FOR SALE—Horsemint extracted honey. Also dark honey from Huckleberry. Put up in new 60 pound tin cans. Write for prices. **A. L. KRUEGER**, New Ulm, Texas.

FOR SALE—A carload of fine Clover and basswood blend of extracted honey, in New York state. Parties interested kindly address **CARLOAD**, Care **THE BEE-KEEPERS' REVIEW**, Northstar, Mich.

FOR SALE—A fine grade of Clover extracted honey; also some blended with basswood. New 60 pound net tin cans, two in a case for shipment. Sample free. Address **C. D. TOWNSEND**, Stockbridge, Mich.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address **JNO. F. SHAW**, Atascosa, Texas.

BEEES AND QUEENS

FOR SALE—Ninety-four colonies of bees in nine frame hives. Also about 200 supers and other equipment for working them. Address **A. S. CROTZER**, Lena, Ill.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. **D. J. BLOCHER**, Pearl City, Ill.

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5 $\frac{3}{8}$ in. depth supers nailed and painted (220-10 fr. 40-8 fr. ext. sup. 5 $\frac{3}{8}$ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address **WM McKIBBEN**, Ontario, Ore.

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen.....	.....	75
1 doz.....	.....	\$7.20
4 doz. or more.....	.....	50 cents each

J. H. HAUGHEY, Berrien Springs, Mich.

The Secretary's Corner

(Continued from page 452)

Members who produce honey as a vocation 8 per cent.

Members who produce honey as an avocation 90 per cent.

Members who are hired to study the entomological work, and other salaried non-producers, 1-3 of 1 per cent.

Balance of membership unclassified.

These figures if they mean anything, mean that the tail has been wagging the dog by following the policy which has been pursued and is still insisted on, of not allowing the National to assist in finding a better market for honey. If there is any good reason for this, I would like to hear it. I know of none that will stand fire. Look at the above list. The manufacturers would be benefited, the supply dealers would be, those who sell honey would be, the specialists would be, the small producer would be, leaving only the salaried non-producer who would not be directly interested in a better price of honey. It is the very large class of persons who do not make a specialty of the business who need the support of the Association, as they do not have enough interest to go to the conventions; but the price is vital to them in degree, as much as to the largest producer. It is the interests of these that we all should conserve. The vocationalist and the manufacturer has enough interest to attend the conventions. The little fellow can assist in making a local market and BOOSTING that way.

Isn't it high time we adopted a settled policy in regard to this matter? It has been a bone of contention for a long time. It came up last year, and will come up again this year. There is no use in hiding this fact, as it is a condition that must be definitely settled sooner or later, and secrecy only makes things worse. I feel sure that it has been the secret moves, that has caused dissensions, misunderstandings and trouble. I feel sure also, that the membership are agreed on the policy we should pursue if we all properly understood each other.

In the policy of the Association,

as I have already stated, buying and selling honey in itself is not to be thought of. The idea of co-operating with the different branches in distributing honey can be worked out and doubtless will be in the near future. The organized exploitation of honey is entirely in the province and reach of the National Association.

I am going to propose a platform with only one plank, but it is strong enough to hold us all without breaking, and broad enough to give room for all to stand on without jostling, and it is "Get together and promote the consumption, increase the demand, and stiffen the price of honey." I am going to stand on that platform, shout for that issue, and vote for that policy as long as I am officially connected with the National, and when I am a layman, I will follow the lead of some better man who flies this flag.

The organization of a circuit so that the Associations of adjacent states may have the benefit of a number of able lectures, at a minimum of expense is an idea that I am glad to see is about to be arranged. Dr. Phillips and others proposed this a few years ago, but it fell through with. It is Frank Pellet who is arranging it now—good work. This is getting right at the heart of the matter. The true place for a good social meeting and educational work and genuine enthusiasm is in the state meetings. We have no better young man anywhere for this kind of work than Mr. Pellett. We speak for your services in advance at our next state meeting. Frank.

One more thought before I close. In the proposed amendments, we have one that looks good to me. That one that gives all the members even if they have to stay at home, a voice in the policy of the Association by electing the officers by a popular vote, instead of by a few delegates. Suppose that 4,490 members wished any given policy carried out, and stay at home by stress of circumstances, suppose that the other 10 out of a membership of 5,000 were directly opposed to this policy, but were the delegates to elect the officers intrusted to carry out the policies of the Association. They have it in their power as it

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. Beebe, Mosinee, Wis., Route No. 1.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

RAW FURS—Honest grade and full market price shipments held separate on request. I pay charges on lots worth \$10 or over. You get value rec'd when you ship so ask for price list and mention Review. GEO. KRAMER, Valencia, Pa.

FOR SALE—100 second hand 8 and 9 frame hive bodies at 20c each. Write for description. C. D. TOWNSEND, Stockbridge, Mich.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

A sober young man who has had experience, desires a position in beeyard for next season. Address 1915, The Bee-Keepers' Review, Northstar, Mich.

We have for sale at Plano, Ill. 100 lbs of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb., in 50 lb. lots or more. Address The Bee-Keepers' Review, Northstar, Mich.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

Gather In the White Sweet Clover Seed

Those who have had experience tell us that it is wonderful how well white sweet clover yields seed. We were wondering if there were not many of our members who live in a locality where sweet clover seed can be harvested at a profit.

The very best seed is cut and thrashed by hand, then run through a fanning mill. This is the method that produces the unhulled variety, which is usually free from weed seed or foreign matter.

WHITE SWEET CLOVER SEED—10,000 pounds unhulled at 12c per pound, 8,000 pounds hulled cleaned seed at 20c per pound sacks 25c extra. Immediate shipment. B. F. SMITH JR., Cowley, Wyo.

FOR SALE—Twenty-five colonies of heavy, healthy bees. Forty comb honey supers complete. Empty bodies, etc. Two incubators. Two horse engine, with saw and feed grinder. Address G. M. Withrow, Mechanicsburg, Ill.

White Sweet Clover Seed

We have for sale in Buhl, Idaho, a quantity of unhulled white sweet clover seed that we can furnish as long as it lasts at 12c per pound on track there. Also some Hulled white at 20 cents a pound there. To get these low prices the order should be for not less than 50 pounds of one kind. Address

THE BEE-KEEPERS' REVIEW
Norinstar, Michigan

FOR SALE—At reasonable prices for cash and terms, very fine Apple Orchard in bearing, located in the GREAT PE-COS VALLEY. Will sell in 5, 10 and 20 acre tracts, full water rights in Northern Carol. Clear title. Will sell my home place, that is nicely improved. Have some valuable vacant acres to dispose of. Also a fine small Alfalfa farm, fairly well improved. All of this property lies in or close into the town of Hagermon, N. M., a growing little city of 500 people.

Will sell 50 to 100 colonies of healthy BEES with each tract of land if desired, or will sell BEES separately. This is the land of Sunshine, a country of the BIG RED APPLE, ALFALFA and HONEY. A failure in crop is unknown. The elevation is 3500 feet, a residence here is a sure cure for Asthma, throat and lung trouble. Reason for selling, Owner retiring from active work. HENRY C. BARRON, Hagermon, New Mexico.

LABELS FOR HONEY—According to the interstate commerce ruling, honey put up for retail trade since September 3rd. MUST contain a net weight label. The little label shown here is one inch by two inches and is gummed all ready to stick to the section, or jar, as the case may be. The reading can be changed to suit each individual need without extra charge. The figures indicative of the number of ounces can be left blank, and the amount written in with a pen, if so desired. 2000, one by two inch, net weight, gummed Labels for only a dollar, postpaid. Address the Bee-Keepers' Review, Northstar, Michigan.

This Honey produced by

HOMER G. SMITH
Parkville, Mich.

It contains 14 ounces of HONEY
exclusive of wood.

is now, to overrule the will of the 4,480 majority, and carry out the policy of the 10. Of course this is not probable, but it is possible, and although beekeepers are the salt of the earth, and will not intentionally wrong anybody, it is said that even angels gave way to ambition and had a falling out, and we beekeepers are not all angels—yet.

California Apiculture Up and Down to Date

(Continued from page 455)

instrumental in securing valuable legislation; has issued a system of crop reports; has established a successful and popular journal, the "Western Honey Bee," and is now engaged in preparing an exhibit for the 1915 expositions which will be a credit to the state and to our industry.

Again, beekeeping in California is conducted as a business rather than as an avocation, far more than in the east. Comparatively few bees are kept in the patriarchal way or as an adjunct to general farming. A surprising number of our most extensive apiarists are single men and live on claims that they have bought, homesteaded, or simply squatted on, in the mountains. But nearly all those who are men of family live in the cities or larger towns, quite a distance from their apiaries, which they reach as necessity requires by auto or steam cars. It is a common practice for the beekeeper and his family to close the city home and move to the camp at the principal apiary at the beginning of the main honey flow in May, there to remain until the season closes, while the work in the apiaries is done between trips up the trout brooks and excursions to flower-filled "cienegas" among the higher peaks. Often the roofless camp is pitched merely under the shelter of some huge, spreading live-oak, assured that no rain will fall till autumn, an ideal enjoyment of that "last of life for which the first was made." Then when the harvest is gathered and the last load of honey sent to the warehouse, the auto truck carries the children, tanned and rugged, back to the city and the opening schools.

And so the years drift by, each with its record of scanty dole or brimming

opulence, until finally a day comes when you go to the camp alone, save for the paid servants. The stalwart young shoulders that swung the heavy supers so lightly, are earning the bread of toil in a distant city; and as you lie under the great live-oak at noontide, the old dove's nest in its branches brings to you the sudden realization that nature has again completed her miracle of

THE CYCLE

In winter's solitude the old nest lies,
A withered casque, scarce hiding from
the eyes

The detritus of summer's industries,
Lone—gray—its tenant of the year,
As if some memory still kept him here,
Flits idly by; loud, ringing, clear,
With vernal strength and bouyant
youth elate,

The distant fledgling signals to his
mate.

Pearce Method of Beekeeping

(Continued from page 444)

queen did not fly and meet the drone she would lay nothing but drone eggs and if so I cannot see how your bees can continue for years in the one hive as you state.

When a swarm issues, is it always the young queen that issues with them and does she ever return to the same hive. If not how is the life of the hive prolonged, as the old queen cannot live forever, and a new queen that does not fly out lays only drones, as I understand it?

I want to keep bees for profit and get section honey. I believe your system is the one for me if I can master it so any help you can give me will be greatly appreciated.

Thanking you in anticipation,

Yours very truly,

J. F. O'BRIEN.

* * * *

R. R. 1, Grand Rapids, Michigan.
August 20, 1914.

Mr. J. F. O'Brien,

Dear Sir:—

Your letter from these far away Islands, of July 27th is at hand, and contents noted. I am glad you are working out my method and will do all I can to assist you. I am glad you are using a ten frame as I believe your very prolific Islands will need as large a hive body or brood chamber as a double 10 frame hive will make, to prevent

FIELD SPORTS

When you keep a boy interested in football, baseball, tennis, and the like, you lessen the chances that he will get interested in things not so good for him.

The Youth's Companion, since its enlargement, gives generous space to this matter of athletic training, and gets the best coaches in the country to write for it.

How to practice to become a first-rate pitcher, how to train for a race, how to learn the newest strokes in topics of the greatest interest to boys—swimming—these and a hundred other to girls too for that matter—are touched upon in this important department of The Companion.

And this is only a small part of the service which The Companion renders in any home which it enters. It has points of contact with a hundred interests.

If you do not know The Companion as it is today, let us send you one or two current issues free, that you may thoroughly test the paper's quality. We will send also the Forecast for 1915.

Every new subscriber who sends \$2.00 for the fifty-two weekly issues of 1915 will receive free all the issues of the paper for the remaining weeks of 1914, also The Companion Home Calendar for 1915.

THE YOUTH'S COMPANION

144 Berkeley Street, Boston, Mass.
New subscriptions Received at the Review office.

....The....

Canadian Horticulturist and Bee-Keeper

The Only Bee Publication in
Canada

It is the official organ of the Ontario Bee-Keepers' Association and has incorporated with it the former Canadian Bee Journal.

Bee-Keeping and Horticulture in its various branches are effectively combined to form a live, attractive, and practical monthly magazine.

Well illustrated and up-to-date.
Subscription price postpaid—

Canada—\$1.00 a year.
United States, \$1.25 a year.
Foreign, \$1.50 a year.

Sample Copy sent free on request.

The Horticultural Publish-
ing Co., Limited

Peterboro, Ont., Can.

WHITE SWEET CLOVER SEED—We are getting in "touch" with several members who will harvest a considerable White Sweet Clover Seed this fall. Last season we could not get half enough of the unhulled white to supply our members. We would suggest that those wanting seed place their order early this fall, as we anticipate another season of heavy demand. You may send in \$15 per hundred pounds for the unhulled white variety, and if the price is more or less this can be adjusted at the time of shipment. Address The Beekeepers' Review, Northstar, Mich.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

In answering advertisements in the REVIEW, kindly say, I saw your advertisement in the BEE-KEEPERS' REVIEW.

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame, \$3.50; six two-frame, \$20.40; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

swarming. You will notice we are only using and recommending an 8 frame hive here doubled. Your trouble in having your bees swarm was undoubtedly caused by placing the queen excluders between your hives. You see by so doing you were only giving your queens the capacity of one hive to deposit eggs in so to relieve you and your queens of their difficulty you will have to take out the excluders and lay them away where they will not annoy you. We have very little use for excluders unless we put them on top of our strong colonies to hatch queens above them. So now listen: The evidence is that you have a most splendid location for honey gathering, and to prevent natural swarming and hold your bees together through the honey flow you would have to give your queens the full capacity of the two 10 frame bodies and also early in the season put on comb honey supers in plenty. We often put on enough for 100 or if a plentiful run is expected enough for 150 at once, but as you see this makes a very tall hive, and to protect it from severe winds and storms which all places are subject to. You should build a shelter for them a description of which you will find in my articles in the Review, but maybe you do not take the Review. If not I would suggest that you send at once \$1.50 to E. D. Townsend, Northstar, Michigan and you will be made a member of the National Beekeepers, and get the Review. Also tell him to send you the back numbers to January if he can. These will give you a pretty good understanding of this method. And in the August 1914 number, my article on the cause of swarming and swarm control will show you plainly where you were making the mistake in putting the excluders between your two bodies, but I see this letter was written before you would get the August number, if you are now taking the Review.

You mention that they have plenty of room, but you see it is giving the queen access to plenty of room at all times that prevents swarming and by having this large body and plenty of cases on, the bees will carry the honey up into these cases just where you want them to carry it and leave the room in the brood nest for the queen, so

you see our queens are not restricted at all but are free to go at any time they wish to, but we make conditions so at all times that they have no desire to leave.

It is the old queen that always heads off the first swarm. Young queens lead off all others. The queens only meet the males once in a life time. The bees perpetuate their existence by superseding the old queen. When she fails to fulfill the requirements of egg laying in the hive the bees start new queen cells and destroy the old queen and raise a new one to supersede the old one.

I am glad you believe in my method which I have been carefully working out for 25 years and I want to say to you if you master it, you have one of the best things I know of and the honey resources are unlimited before you. It is as wide as the world and almost unoccupied and I wish you the best of success in it and I hope you will be inspired by it.

Yours truly,

J. A. PEARCE,

R. R. 1, Grand Rapids, Mich.

P. S. As soon as there is the least honey in the bottom of a cell it is of no use for the queen to deposit eggs in.

All old bees die each spring and a new lot takes the place of the old ones. Many do not know this.

It would be desirable for each to raise at least all the queens needed for the home apiary, if not more, by getting a first class mother in the spring. She will give all the eggs you need and far more. Learn how.

Combating Foul Brood in Winter

(Continued from page 442)

clean with one colony which is under suspicion. Next spring the apiary will be carefully inspected and thoroughly treated.

The experience of Jan. 2nd was very enlightening. It appears that many diseased colonies survive the summer and autumn only to die in early winter, leaving more or less honey for roving bees to find and carry away. Serious cases of disease through the bees might still be in possession of the hive were

easy to diagnose. Treatment with weather too cold for robbers and too cold for bees, which might carry disease, to find entrance into healthy colonies was very simple and easy.

The experience has taught the writer that it is a great mistake for bee-inspectors to wait till spring before beginning their active duties. Winter treatment will do more than anything else to keep foul-brood in check. Up-to-date bee-keepers will of course not furnish the conditions which this let-alone apiary showed (unless they be owners of let-alone apiaries in the manner of the writer. But there are thousands of let-alone apiaries in this country, and many of these are this day diseased. Many hives are standing this minute without live bees, but with honey which next April will carry desolation in thousands of healthy colonies. Why leave those hives till April?

Let the inspector do some traveling this winter. Let him go through the country. With the bushes and trees leafless he will readily see the two hives here, the three there, and the single one yonder. Let each hive be opened up, tipped over if a box-hive, uncovered if a frame hive. If frame, then lay a cloth over all frames except those being manipulated. Any man, who has the ability to do inspection at any time, will find it extremely easy to spot serious cases of disease. If there are 10,000 bees in a hive he does not need to stop three seconds with that colony. But if there are bees between combs in only two spaces, then let him look sharp. Even if there are bees covering portions of five or six combs while the cluster shows other dimensions small, care must be shown. Let judgment be shown here. 5000 bees will do to leave if other conditions are satisfactory. If there are under 5000 bees and there is any evidence of disease that colony should be sacrificed for the good of the others. If a colony shows only 1000 bees it should be sacrificed anyway, for it is a menace if left.

In our New England climate it is rarely possible for much fewer than 5000 bees to winter in the open. So it happens that a colony which has weakened because of disease is quite likely to perish before

In deference to some of the Officers, Directors and Delegates, the Review has not talked trade much so far this year and will not until 1915, after which the majority ought to be recognized.

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Reliable Squab Journal
Versailles, Mo.

spring. If such a colony is taken care of in the winter, it is likely to save more inspection later. The writer is aware that it is orthodox to take a vacation in inspection work during the winter months but he now believes that orthodox teaching to be false instead of true.

It is not meant in this article to imply that colonies should be shaken during the winter season for disease, but simply all hopeless cases be disposed of. Even shaking of several weaklings into one could be carried out if the day were a quiet, sunny one and combs of healthy honey furnished the united bees.

North Yakima, Wash.
Nov. 8th, 1914.

Editor Review:—The Washington State Beekeepers' Association will hold their twenty-first annual convention on Wednesday and Thursday, January 6th and 7th, 1915. We desire a full attendance as matters of vital importance are to be discussed; especially, the foul brood law.

Yours very truly,
J. B. RAMAGE, Sec.

Topeka, Kans., Nov. 5, 1914.

The annual meeting of the Kansas State Beekeepers' Ass'n will be held in the Commercial club rooms, Topeka, Dec. 4th and 5th. Mr. Frank C. Pellett of Iowa will be present and give a lecture on the subject of "Wintering."

Everyone interested in bees is requested to attend.

O. A. KEENE, Sec'y.

White or Goldenrod Cover--Which?

I do not care about the color of the Review's cover. But if the extra expense of the yellow cover diminishes the amount of reading matter available, I want the white. The reading matter is what I want.

Yours truly,
ADRIAN GETAZ,
Knoxville, Tenn.

Deer Plain, Ill., Jan. 15th, 1914

The Bee-Keepers' Review:—On account of sickness in family we have not been home for over a month hence the delay in renewing promptly.

My Dear Mr. Editor, If you and all of the beekeepers of this coun-

try had seen and heard what I did the past few months, that is in marketing country produce, etc. I dare say that all producers would unite at once and tell those commission men and dealers just exactly what's what but just keep on hammering away as you have in the past and we will succeed after a while in running our own business as the association is doing lots of good already, and with the proper financial aid and management in the future it should produce wonderful results to the producers of this country.

Yours truly,

F. X. ARNOLD.

Oran, N. Y., Sept. 21st, 1914.
The Bee-Keepers' Review:

Our white honey is all sold and we want to thank you for your assistance in selling it. We still have some fine Amber extracted, quite strongly flavored with buckwheat. Yours very respectfully,

C. H. BURROWS.

Idaho Falls, Idaho,
October 6, 1914.

The Bee-Keepers' Review,
Northstar, Mich.

At a meeting of our directors yesterday, it was ordered that a donation of \$10.00 be made to the REVIEW indebtedness subscription list and we have pleasure in handing you herewith our check for that amount.

Yours truly,

Idaho Honey Producers' Ass'n.
F. C. Bowman, Secretary.

Read the wonderful clubbing rates on another page of this number and subscribe today.

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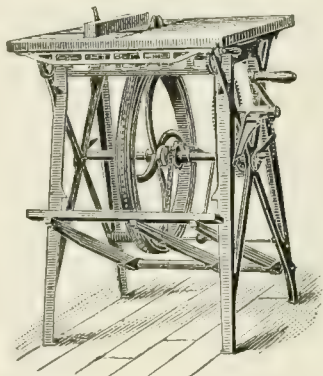
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American Bee Journal

ANNOUNCES

Two Big Features--Beginning Jan. 1915

FRANK C. PELLETT, well known lecturer, naturalist and State Inspector for Iowa will write a series of articles well illustrated on "**Honey Flora of the United States.**"

QUEEN REARING IN ITALY. While in Italy last year, C. P. Dadant, had the opportunity to visit a modern queen-rearing establishment. He states that it is the finest and best kept apiary and queen establishment he has ever seen. Full particulars with illustrations in January number,

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State Inspector of Apiaries.

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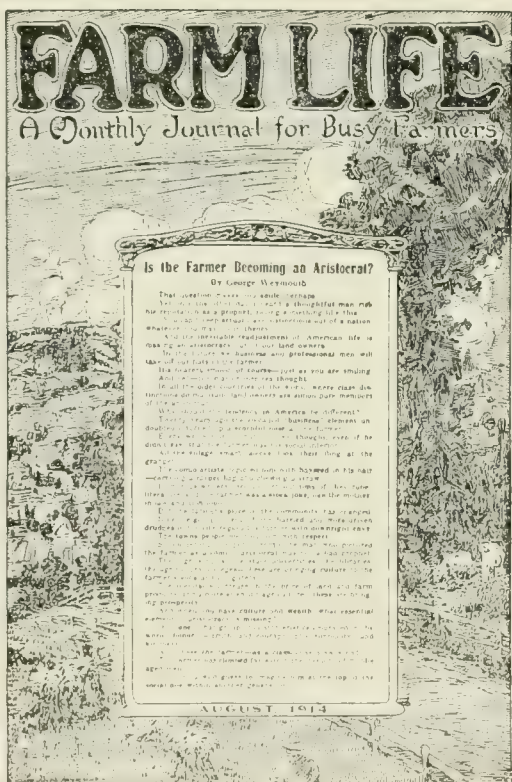
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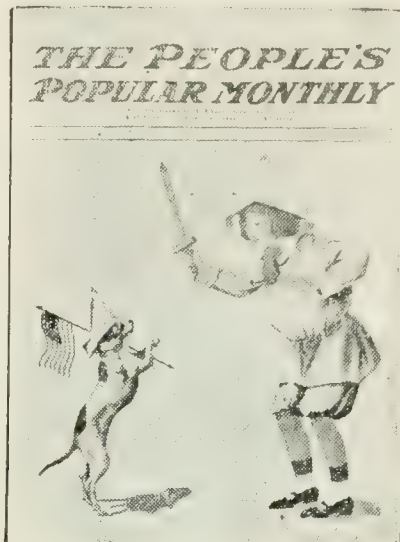


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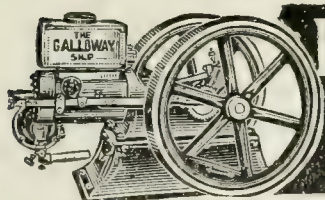
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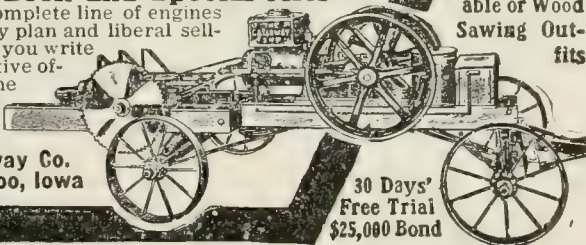
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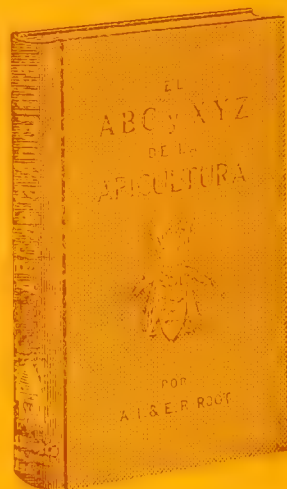
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American Bee Journal

ANNOUNCES

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AMERICAN BEE JOURNAL

Hamilton - Illinois

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OFFICIAL ORGAN OF THE NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

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No. 1

"Everyone their own Inspector,"
Morley Pettit at the Michigan
State convention.

* * *

"With a properly constructed cellar and sugar syrup to winter on, there should be no winter loss."
David Running at the Michigan State convention.

* * *

The announcement of those secretaries sending in the greatest number of subscribers during 1914 will be made in the February number of the Review. In the March number we will publish a list of those sending in subscribers during January, this year. We take this opportunity to thank the many secretaries for the great array of subscribers sent us during 1914, and hope to be favored with your many kindnesses during 1915. In the meantime we hope to send you many more members for your respective associations during 1915 than during 1914.

"A long sub-earth ventilation of tile through damp soil may do more harm than good by the damp air it may bring into the cellar." At the Michigan State Convention.

* * *

Extracts from the President's address. Michigan State Convention.
"Spend more money among members
* * * Pay the secretary more money so he can stir things up, even if it be half the receipts * * * Was sick a year ago so could not go to St. Louis as a delegate, as much as it would have pleased him to have done so * * * Michigan has the most even crops of honey one year with another than any other state. There is rarely ever a complete failure, and by scattering outyards at different points, a crop is usually secured. Dues should be more than 50c per annum, a dollar being none too much. The state association should be represented at the Denver delegate meeting by more than one delegate.

David Running uses two eight frame brood nests, until opening of the honey flow, as a brood nest. At this time they are separated and an extracting super placed between and an excluder placed over the lower story, with the queen below. Fifty percent of the brood nest placed on top build queen cells. If an entrance is given them at this upper portion of their hive so the young queen can fly out and mate, a queen is usually produced above. If no attention is paid to the cells above, no swarming is had on this account.

* * *

At the Michigan State Convention at East Lansing, Dec. 9-10th the following officers and delegates were elected for the ensuing year: President, David Running, Fillion, Mich.; V. President, G. Frank Pease, Marshall, Mich.; Sec. Treasurer, F. E. Millen, East Lansing, Mich. Delegates to the Denver convention were elected as follows: David Running, Fillion, Mich. Alternates: E. D. Townsend, Northstar, Mich.; F. E. Millen, East Lansing, Mich. Delegates were instructed to cast their vote in favor of the National continuing the publication of the Review, the selling of supplies and charging a National fee of 50c per annum.

* * *

A good ventilator for a bee cellar is to lay an intake pipe at the lower corner of the cellar, extending out say two rods, then elbow to the surface. A pipe is now attached to the inner end of the ventilator tube, extending to the cellar ceiling. With this arrangement the cool air from outside is let into the cellar at the TOP, to mingle with the hot. With this arrangement the air in the cellar is more evenly mixed, consequently, a more even temperature throughout the cellar. An eight inch intake is better than smaller, for if not needed, it can be shut off.

The largest intake is used during warm spells, or toward spring, when the bees may be getting uneasy and liable to cause the temperature to run too high. The ventilator, proper, is at the opposite corner of the cellar from the intake, and

should be of good size for the same reason mentioned in describing intake. It extends to the cellar bottom and up through the roof. This rather large ventilator draws the poisonous gases from the bottom of the cellar, for there is no opening at other points. At the Michigan.

* * *

Bee diseases, hard winters and poor seasons are responsible for many dropping out of our beloved pursuit. Only the more advanced, better posted persons surviving. It is up to the individual whether you succeed, or be numbered with those who have "fallen by the wayside." Get clear up to the top! You will have more faith in your business in the future if you turn out to the National convention at Denver next February.

* * *

The best talent in the world will tell you how to do things in the best way at the National convention at Denver Feb. 16, 17, 18th. Will you profit by it? You are invited to share in the good things that will surely be given at that meeting.

* * *

We copy in part from a private letter from Sec. Williams, as follows:

"Just had an interview with the G. P. A. of the A. T. & Santa Fe R. R., in regard to transportation to the Denver meeting. I suggested that it would be a good plan for the Eastern people to meet at Chicago and all go together from there in a special coach. Of course, I did not give him any assurance that we would use the Santa Fe, or any other special road. They will "come across" all right. There are a couple of other roads that are wanting the business of the beekeepers. There is a plan on foot to arrange a series of consecutive meetings in the Central-Western states and have a party to go from one to another in succession. I am having some railroad men plan out an itinerary with probable cost, etc., to connect in the best manner the different points.

Several of our folks would prefer the C. B. & Q. R. R. out of Chicago, as its connections or rather routing is superior to any other. How would it be to go one way and come another? Get two roads interested that way.

I am urging the secretaries to use every effort to have a full attendance of delegates, and where they cannot attend in person, to have proxies appointed, fully instructed how to vote on all matters likely to come up. I am doing this to get out as full an attendance as possible."

We are still short of January and February, 1914, numbers of the Review, to supply those who are short. If you do not preserve the numbers of The Review and will mail those two numbers to this office they will be appreciated.

Beekeeping is advancing with strides. The only way to keep pace with this advancement, is to attend conventions and read all the bee papers, and then hustle. You will gain inspiration by attending the National convention at Denver next February. Will you take advantage of this opportunity?

Our genial contributor, Mr. J. A. Pearce of Grand Rapids, Mich. has finally been prevailed upon to rewrite his book, "Pearce Method of Beekeeping." He is now spending the long winter evenings on this work and he informed the writer at the Michigan convention that the work was nearly ready for the printer. Those who want to produce comb honey without swarming and the necessary fussing will hail this new work with delight. It will be ready for distribution the latter part of winter or early spring.

Mr. L. G. Purvis, Elwood, Kansas, has secured five members to the National and sent in two subscriptions to the Review during the last few months. Good, member Purvis, we only wish more of our members would consider themselves active members and "roll up their sleeves" and go after new members as you have. Wouldn't we soon have a rousing membership! In behalf of the Association, we thank you, member Purvis.

Secretary Williams is making an effort to get enough members together at Chicago to have a tourist car secured for the members' special use from there to Denver to attend the National convention.

Those east of Chicago who will attend kindly write Secretary Williams to that effect, so arrangements in detail can be made.

This is December 14th. The last of our bees go into winter yards today, 1135 colonies. They are distributed in ten yards as follows: Salt, 103; Chippewa, 72; Frost, 107; Manchester, 96; Swift, 96; Bad River, 96; Welch, 79; Stanton, 96; Jenner, 96; Wolf 86; Cellar, 208.

The first six mentioned yards are packed in cases containing from three to six inches of straw, chaff or forest leaves. The last four mentioned yards are packed with forest leaves and clover chaff, encased in tarred paper. The 208 is in the cellar under my oldest son's dwelling house.

Seals for Popularizing Honey

The American Bee Journal is now offering for sale, at only 35 cents per thousand, seals for pasting on the back of your letters, similar to the Red Cross Seal. They are in two colors and read "Eat Honey." The Review recommends them to the producer as a novel way of keeping honey before the public. Buy a thousand and stick one on every package you mail, and it would be a good idea to paste one on each freight and express package shipped. They are gummed all ready to stick on, the same as a postage stamp. Dr. Bonney's fertile mind should be given credit for the idea. Send your order direct to the American Bee Journal, Hamilton, Ill., or if more convenient, you can order through this office.

Something About the Review Contract with Mr. Tyrrell

We quote in part from a private letter of recent date from Ex. Secretary Tyrrell as follows:

Now, regarding the Review debt, why the hurry for having it paid up this fall. No one has heard of me crowding the Association and I am afraid the fellows who are crowding you may be doing so because they can see in that a means of getting the Review separated from the Association. Send me, at any time, whatever you desire and take your time on the balance. If it is not paid for at the end of five years and things are going as they are now with the Review, we can make a new contract. It is not my desire to in any way embarrass the Association and I don't like to see the other fellows embarrass it.

(That sounds just like Mr. Tyrrell, always having a very great interest in the National Association. It is no wonder that he would make us such a liberal suggestion in regard to the financial dealings of the Review. We can assure you, friend Tyrrell, that it is not the honey producer who is agitating the selling of the Review and we cannot make ourselves believe that the 95 per cent of producers who are in favor of publishing an official organ will, through indifference, allow 5 per cent of our members to dominate along this line. Write your delegate to the Denver convention your wants. It will have an effect. Do not delay, "DO IT TODAY."—Ed.)

Prof. W. H. Worden Brookings, S. Dakota, has been appointed Apiarist at the South Dakota State College.

Bee Pasture on the Increase in Florida

We would call attention to the article by Mr. C. H. Clute, of Palmetto, Fla. in this issue of the Review. While a little over-enthusiastic, perhaps, Mr. Clute surely believes in his location, and is willing to let others know of his great find, as he thoroughly believes it to be. Personally, we are sure that Manatee County is a great honey country; but it has not yet equalled the records of several counties on the East Coast in former years. Heretofore, much of the county was unoccupied by beemen (we mean Manatee county) everybody seeming to think that Bradentown, and immediate vicinity was the only part of the county worth living in at all! As a result, Mr. Rood, one of the first, and always one of the foremost, beemen of that county, had to take up trucking, because so many apiarists insisted on locating large, and often, many, apiaries right in and about the town, fairly driving Mr. Rood to out-apiaries, and outside interests. I know of no section so thoroughly well stocked, (not to say over-stocked), as the section in and about Bradentown. Ask Mr. Rood, he can tell you! As Mr. Clute says, however, one does not have to go far back from the towns to get away from apiaries. Of one thing we feel sure; not half the State of Florida is yet taken up that is now

available, and we fully believe, that the coming years are going to increase, rather than lessen, the amount of bee pasturage. Drainage and development projects are only ONE of the factors, that are sure to change conditions, and with them bee-flora as well. Apropos of the above, we append a couple of letters from Mr. L. K. Smith, of Carrollton, Ga.

Wintering Bees in Florida

At present writing (Nov. 3rd), our bees here at Deland are in excellent condition for winter. Don't smile, northern friends, when we in Florida speak of "wintering." Our problems are different, to be sure, from yours; but the winter problem, here, is settled by the fall. If our bees go into winter with plenty of young bees, a good queen, and a hive well filled with stores, we are practically sure (ants excepted!) to have them come out in early February with a good lot of brood and a queen laying from one to one and a half combs of new brood per week; by that we mean gaining that amount of brood over the preceding week, on an average. If we can do that, we are sure of a good Orange honey crop, provided orange yields well. But when we say "plenty of honey," we do not mean the accepted and conventional 30 pounds of the north. Forty or even fifty pounds is not too much, from the first of November to the first of March, which is about the average time, in this section, bees must "carry over," from the time when they cease storing any surplus, to the time of surplus again. In these four months, if the winter be a warm one, the fifty pounds, even, of honey will look like a one cent piece! For in warm weather bees consume much more honey than in cooler winters; and in the spring, when once breeding gets well under way, and pollen begins to come in well, three combs of honey, full to the top bar, I have seen changed into brood in two weeks. The bees fairly walk into their stores then. And I have noticed that "Millions in the home," as Doolittle puts it, is one of the best incentives to EARLY breeding of all possible means of early stimulation, not even excepting stimulative feeding. Mr. Poppleton used to test any hive by going to the rear, and "hefting" it, lifting it a few inches off the bottom of stand; if he

had to "grunt" as he lifted, he would smile with a look of blissful content, and say, "That one is O. K. for next year," and pass on. In former years we used to worry over too much honey in our hives for the queen to do her best, and would sometimes remove filled combs for empty ones, in the middle of the brood nest. We have ceased all that now, since we have seen the almost incredible manner in which a little patch of brood, in the center, in January, will, under proper conditions, spread into three, four, five, seven and eight combs of brood, within four or five weeks, and all the honey that was crowded into these combs be nowhere visible. So we say to beemen, in Florida, if any are in doubt how much honey to leave in a hive, first of November, "the more the better."

Wintering Bees in Tar Felt Paper

Unlike the usual manner of packing bees with tar paper where there may be nothing but the paper to protect the bees, our mode of packing simply uses the paper for a case to hold the clover chaff or forest leaves we used in packing, for the paper cases are so arranged that there is on the average 3 in. of packing at the sides and 8 in. at the top.

Two colonies are packed side by side. For the case cut 32" tar paper in strips 7 ft. 4" long, sew the two ends together with four small wires, 8d nails. This will make an endless belt, so to speak of the case. Telescope one end over the two hives. It is now ready to tack strips of lath around the bot-

tom to hold the packing from sifting through at that point.

The length we cut our paper for the case, determines to some extent the amount of packing we can use. Before nailing on the lath at the bottom, folds in the paper are made at each corner, thus taking up the bottom to the size required. This leaves the case "bagging" to hold the packing. This size case will hold about three inches of packing at the sides and eight or ten on top, after which the top edge of the paper is folded in toward the center from the four different ways and over all a cover of the same paper the length of the case. Top of the felt cover we place the regular hive covers and they are tied on with a string at each end. Two years ago we wintered 16 colonies in good shape packed this way and we have confidence enough in this plan to risk four yards this winter.

We have started the new year with some few changes in the Review. In the first place the frontispiece has been discontinued, and the consequent previous blank page. This will make at least one page more reading matter for 1915. Then you will notice that you are receiving forty pages and cover, and eight point, or small type, the same as has been used beginning with the May number 1914. In other words, we are giving the equivalent of eight more pages in the Review than EVER, excepting during the last eight months of 1914. We hope to be able to continue this extra size of the Review from now on.

The Future of Beekeeping

BY E. D. TOWNSEND, Northstar, Michigan

Given at the Michigan State Convention, Lansing, Michigan, Dec. 9-10, 1914

In speaking of the future, one can only judge by the past and present indications. I began beekeeping in 1876, 39 seasons ago. A mighty change has transpired in the beekeeping world since that period. Comb honey at that time was mostly pro-

duced in "caps" put on top of the log gum of box hive, for the movable comb hive had only been invented a little over a score of years, and had not been introduced only in the apiaries of the most progressive beekeepers. A few at that time had

adopted what was known at that time as the 6-lb. box, or cap. There was a terrible howl went up at this innovation, many claiming that bees would not work in such cramped quarters. The old or regular cap weighed nearly 20 pounds and sometimes more. Most of the movable frame hives at this time were of the 8-frame width. At about the same time of the introduction of the 6-lb. box, or cap, as it was then called, some enterprising genius made a shallow frame to go crosswise of this eight frame super, making a frame to retail at only 2 pounds weight. This was the limit. The big cap advocates held up their hands in disgust. They said bees would not store honey in such small frames. For several years this 2 lb. section, as it was called, was the leading one used by the most progressive, and it came to pass that dealers did not like to handle the large cap, after once selling the 2-lb. size. Following the 2-lb. came the present pound section which seems to be as small as is advisable to get comb honey stored in.

The extractor was also introduced during my early beekeeping. At this time we have no disease among our bees to contend with, neither were the winters so severe on bees as at the present time. It was not long, however, until some began to protect their bees, either by chaff hives of cellar wintering, for winter losses began to follow the improved methods of beekeeping. Bees would not winter well, so as to be profitable without protection. Later, we had the dread disease, foul brood, coupled with hard winters to contend with. You before me know with what results. The thousands of farmers who used to keep from one to twenty colonies of bees are practically no more. Disease and hard winters have put

them out of business. This same process is at work today. The beekeeper who does not post himself along the modern line of beekeeping cannot expect to survive at the present time. Disease and hard winters will get him. This process of weeding out the weakling has kept going on until at the present time the greater part of our surplus honey is produced by business beekeepers, who post themselves along modern lines. Those are the men who will be our future honey producers. Of course, they may not own but one yard, but this scientific principle of procedure must be adhered to in the future, for one to expect success in our beloved pursuit.

Business Beekeeping.

This subject would not be complete were I to close without mentioning the business beekeeper, the one who owns thousands of colonies and produces many carloads of honey annually. This class of beekeepers are on the increase, and before long we will realize that one will have to keep more than one yard of bees to make a livelihood for an ordinary family, competition and over production will be so strong. The silver lining is, that we have a great world to supply with the very best sweet on earth, and it behooves us as an association to start the wheel rolling toward the popularizing of honey. As the production of honey increases in the future, it will be necessary that something be done to call the consumer's attention to honey. Do not allow a single opportunity to pass without saying a good word about honey. Write your local and state papers occasionally, making the communication interesting as well as instructive is likely the best way we, as individuals, can popularize honey. Everlastingly at it will bring results.

WHERE LETTERS ARE ANSWERED

Bee-Keepers' Review—This is the first time I have written the Review since Mr. Hutchinson passed away. I live in one of the most noted honey, fruit and trucking sections of Florida. For six years here I have been on the lookout for the very best bee pas-

turage in the state. I have visited all sections of Florida. Some sections are on the decline, but this one has been on the increase—more plants, and bloom all the time. Spanish needle has started within the past six years, and now yields well, and

is taking many of the vacant groves and fields. Georgia clover, also called Mexican clover, has started, and is fast on the increase. The partridge pea, a big yielder in the northern part of Florida, and southern Georgia, has started here several years ago, and now there are many acres of it. The water hyacinth is rapidly taking the ponds and water courses. Years ago, orange flow was not thought of; now the yields average fifty pounds orange honey per hive, every year. Some hives will exceed 100 lbs. of this honey yearly. One mile here makes a big difference in honey sources. We have palmetto bloom everywhere that gives a rich, fine-flavored honey, and some years back yielded as much as 200 lbs. per colony. Now the average is about 50 lbs. from this source. Mangrove is a heavy yielder, and there are thousands of acres unoccupied.

I will name some of our honey plants in rotation, then one great and new source, and a great surprise to all: February, pennyroyal; February and March, maple, myrtle, pennyroyal, willow, grange Spanish needle, etc.; March and April, orange persimmon, live oak, gallberry; May and June, saw palmetto; June and July, mangrove, also woodvines and the prickly ash, and also cabbage palmetto. August has heretofore counted as naught. Here are a few words from one of our former apiarists of the state relative to the month of August. It is from Mr. O. O. Poppleton, of Stewart, Fla.

"Mr. C. H. Clute, Bradentown, Fla.

Dear Sir:—Yours of the 1st inst. received. No, I know of no place in Florida at all sure of a flow of honey in August. There is a weed, a Thoroughwort, commencing to come in spots along the east coast that sometimes, but rarely yields in August, but it is not yet abundant. It may yield in a few years enough to become valuable."

Mr. Poppleton had his eyes on this plant. I had no hope for the month of August as a honey month. In the past two years there have been thousands of acres drained by a big canal, and now here comes the Thoroughwort, as Mr. Poppleton mentioned, and in abundance. Also besides the Thoroughwort are thousands of acres of Smart weed, a new source of fine, white honey that yields heavily. It grows from two to three feet in

height, and will last far into the winter. There are also large areas of wild Sunflower, standing ten to fifteen feet high, that will soon begin to bloom, yielding heavily but of an inferior grade of honey. It will easily color the light colored Smart weed honey. There is at present only one apiary moved to this region, as it is hard to reach, though it is only one and one-half miles from a depot. This large section is going to be a great boon to beemen, and will soon, no doubt, be all occupied, when its great merits become known.

The average apiary, even three miles away, is now getting dark honey. The September flow is largely from sea myrtle, Spanish needles; October from Spanish needles, golden rod, and later also from Land Myrtle and Sunflower. With salt water goldenrod and a host of other bloom. Spanish needle blooms twice a year, the Myrtle, also Orange blooms some years a second time in June; pennyroyal blooms the fore part of the winter. There are several other kinds of plants that I have not named which are fine as helpers in the total yield. Many Eucalyptus trees are being set out hereabouts, also some buckwheat, sumac, lots of cucumbers in winter, and also squash. Bees here today (October 10th) are getting red pollen, and one mile from here the pollen is all white. Bees at Terra-cea, Fla., are getting Spanish needle and golden rod honey; bees by the canal are gathering from golden rod and Thoroughwort, but not from Spanish needle.

Yours respectfully,

C. H. CLUTE.

(The above article from Mr. Clute shows his enthusiasm, and his unbounded faith in his section, as the banner section of Florida, for honey production. It also proves our correspondent's unselfish willingness to share with brother beemen whatever advantages may be in the location named. Many an apiarist would wish to hide his good news under a bushel, and keep all to himself. We commend this attitude as illustrated in the article above. While we admit much of what Mr. Clute says, we wish to call attention to one or two items in the paper that may need some explanation. First of all, Palmetto is on the north side of Manatee River, not far from Bradentown, about 20 miles from Port Tampa,

south from that point across the Tampa Bay. It is on the Seaboard Air Line R. R. on the west coast, of course, of Florida. The Mangrove (the black mangrove) has never proved itself a very heavy yielder, on the west coast, compared with the yields on the east coast of the state. Why, no one knows. Mr. Shumard, formerly on Sarasota Bay, a little to the south of Palmetto, said that he seldom secured much honey from Mangrove, and Mr. O. O. Poppleton, referred to by our correspondent, assured me that he had never heard of any such yields on west side, that he had on the eastern coast. It MAY be that these conditions will change, possibly are now changing. We hope, from what Mr. Clute writes, that it is so already. We do not know just what species of plant our correspondent refers to by the Thoroughwort, but we are writing him for a specimen, and if it comes in good condition, we can discover the botanical and scientific name. It is probably the familiar Boneset. The point, that it is coming thickly along the line of a canal, made by man, is interesting. On the east coast, above Bulow, Fla., is a large canal connecting the salt rivers of the east shore line; and it is along the land drained by this canal that Alfalfa clover is beginning to make itself felt as a honey yielder. Who knows what may yet await Floridians in the big drainage projects that are now under way? We are also glad to learn that the Smartweed is coming in abundantly in the section named. It has long been known that wild Sunflower and pennyroyal are great factors in the southern half of the state, the former for its inferior honey, the latter among the best honeys in any country. Mr. Poppleton declared that he knew of none better anywhere than the honey from pennyroyal. The Partridge Pea, mentioned, is the Cassia Chamaecrista. That we described for Gleanings, and later for A B C and X Y Z of Beekeeping, See editorial elsewhere in this issue. In fact, all these sources of honey named by our correspondent except Thoroughwort have been described in the A B C.)

Carrollton, Ga., Oct. 16, 1914.

Prof. Edwin G. Baldwin,
Deland, Fla.

Dear Sir:

I have been in correspondence with

Mr. C. H. Clute, Palmetto, Florida, about the bee business in his vicinity, having met him in 1912 on a short visit to Palmetto. In a recent letter he tells me of a wonderful section just discovered along a canal a few miles from his location where oceans of smartweed, wild sunflower, thoroughwort, etc., abound. He is quite enthusiastic over it and thinks it will be much more profitable than the locations he now occupies, or at least will supplement these by moving bees to and from the new field. He tells me you were going out to take photos. I am writing you to get your ideas of the new field and of Manatee County generally, and especially that section around Palmetto, Bradentown, Manatee, etc.

I like working with bees, have owned them more or less for years, and can handle them any way I like. In fact, bees have always interested me greatly, though I have never been in a first class location to produce honey. I have been thinking of moving to Bradentown or Palmetto and engaging in bee culture extensively. I believe I could attend to 200 or 300 hives run for extracted honey. Now, I am writing to request your judgment on the question whether honey flow is sufficiently abundant and reliable about Palmetto or any part of Manatee County for a man to risk giving up a salary of \$150.00 a month and embarking in the bee business there.

I will appreciate your attention to this matter and such information as you can give me.

Yours truly,

L. K. SMITH.

In reply to this letter, we told Mr. Smith, frankly, that we did not believe beekeeping, as a sole occupation in Florida was so sure as a salary of \$150.00 per month. We said that one year varied so much from another and conditions were so subject to cold and other weather conditions that no one location could be depended on to supply a return of, average, \$150.00 per month. We added that out-apiaries, and possibly other lines of business, such as make profitable avocations with the vocation of beekeeping, might make \$150.00 look small; but that it might not be so evenly distributed, one year with another. In conclusion, we told him that if health or pleasure of living, or love of nature and her ways, love

for the open and dislike of being shut in all year long, were prime factors in making one desire a change, then we unhesitatingly could and did recommend to Mr. Smith, or anyone else, immediate embarkation on the sea of apiculture. We did add, however, that we would NEVER (and we underscore it) let go our hold on a \$150.00 job, without first coming to Florida, and investigating, personally, nay, more, first testing out the matter in a small way, say with one apiary, and gradually increase, as the man and location seemed to pan out together. In return, Mr. Smith wrote us the following letter:

Carrollton, Ga., Oct. 29, 1914.

Prof. Edwin G. Baldwin,
Deland, Florida.

Dear Sir:

I have your esteemed favor of the 26th. I appreciate the fact that you have gone so thoroughly into the details. You know Mr. Rood has had a great deal of experience in handling bees in Manatee County and I had the pleasure of meeting him on two occasions, and his advice is very much like yours. That is, that beekeeping is not sufficiently certain in that section for a man to depend on it entirely. I thought that Mr. Clute had better locations than Mr. Rood, perhaps, as he is very enthusiastic, and tells me that his average will run as much as 75 pounds per colony, taking one year with another. That is better than the average in the Tupelo region, if I understand it right. Forty pounds, I think, is about the average in northwest Florida, with most of the beekeepers; that is, where they leave an abundance of honey for winter stores. I know that Mr. J. K. Isbell averages very much above this, but he is evidently very much above the average as a beekeeper. It seems to me that the great advantage of the Tupelo territory is the fact that the honey supply is so abundant that five hundred colonies can be kept in one place successfully. I made a trip to that country on one occasion. There are some serious disadvantages, with which, of course, you are thoroughly familiar.

I would appreciate it if you would give me your idea of the average yield of extracted honey per colony, taking it year by year, in different sections of Florida. I hesitate to ask you to go to this trouble, but you

were so kind as to give me so full an answer to my other letter, I am sure you will not feel that I am asking too much to ask this question.

I appreciate the wisdom of your suggestions and hope they will be beneficial to me.

Yours truly,

L. K. SMITH.

Rostock, Ont., Can.

August 12, 1914

J. A. Pearce, Esq.,

Grand Rapids, Mich..

Dear Sir:—

Having read your notes on cause of swarming and swarm control in August issue of the Review. Having found out myself with some colonies that that was the best possible way, I am enclosing 20 cents postal note if you would be so kind and answer the following questions.

1st. Do you winter them in two chambers or only one?

2nd. If you winter in two chamber as your notes read, do you have to feed some years or is there always enough honey in the two chambers to last till next honey flow?

3rd. If there is plenty honey left in them for winter I should think a super and a half super would be sufficient for mine as I put mine in a ten frame hive, also would the queen enter a half super comb as readily as a full Langstroth comb. I have the Langstroth hive.

4th. If you feed for winter, that is if you do any feeding at all with your two chambers. Do you wait till all brood is hatched or do you feed before on account of a large brood chamber?

5th. Do you requeen every year or not?

6th. Do you put any absorbent on top of hive for winter?

7th. If there was about two combs of pollen left in brood chamber in fall would you leave it there or take it out?

8th. How large is your entrance and what method of ventilation do you use to keep them cool during the honey flow?

Kindly send back this letter so I will know correct answer in rotation, I am.

Your beekeeper friend,

A. J. KREUTER.

R. R. 1, Grand Rapids, Mich.

August 15, 1914.

Mr. A. J. Kreuter,

Dear Sir:—

Your very good intelligent letter with Canadian postal note for reply came to hand yesterday and I hasten to reply to it to the best of my ability. I am pleased that you also have been testing a larger brood chamber and are so well pleased with it. For I felt for several years that I stood almost alone with it for all the big beemen like the Roots, the Millers, the Doolittles, the Hutchinsons and Townsends and the rest were all using a hive about half as large as mine and I almost had to pinch myself to make me believe I was right, but now many are becoming convinced that they are using too small a hive and are changing to a larger one and I feel sure that in 50 years more there will be as few small hives in use as there are large ones now.

In regard to your first questions as to whether I winter in the two bodies or only one. Yes, I winter always in the two bodies. This I find has about completely done away with winter loss, which has hitherto been the greatest disaster to beekeeping. In fact I now wonder that as many bees are brought through the winter in those shallow hives as there are. When we realize that bees cluster down at the bottom of the hive at the beginning of the cold weather and travel only upward for their stores, we then see the necessity for a goodly supply of stores directly above them as they would starve with a quarter of an acre of honey all about them, if none was in the comb above them. And with this big supply of honey on hand they are not afraid to start plentiful brood early, a most essential thing to insure a large stock of bees in time for the harvest.

Question No. 2. As to having to feed some years. I will say with the two bodies on and filled up we never have to feed. One of the first I put up over 20 years ago in a stable loft, have cared for themselves continually and have never been fed. No, they are safe from year to year and make beekeeping the most automatic business I know of.

Question No. 3, in regard to a

super instead of a full body would not be sufficient on 10 frame hives. Yes it would do fairly well for winter but would not be so safe as a full body. But it would put you in a hole when you take off your white honey and want to double up your apiary as we do by just setting these bodies apart and putting in new queens on queen cells and putting a new top body on each to make your increase if you desire it, and double your apiary or let them alone as you desire. Then too, the half body on top would not give the room that is so much desired or go near so far towards preventing swarming naturally. You see the point. I will just say here if you wish to go from the single hive method to the double hive, the best time of all to do it is when you remove your white honey about near the last of July in this latitude, then put on your extra bodies. The queen will not enter sections of half stories quite so readily, as full bodies.

4th. Question. I do not feed at all. If I have to feed to build from the single to the double hive I feed with an inverted tin 10 lb. honey pail with the lid finely perforated like the pepper box feeder. Early feeding is preferable, regardless of Brood. Do not wait for brood to hatch.

5th. Question. Do you re-queen every year? It is better to re-queen each year. But we do not always do it.

6th. Question. Do you put on absorbents for winter? Yes, emphatically; yes about as good a thing is a comb honey super or something like it with a burlap tacked on the bottom and filled with clothes, leaves or chaff. Be sure to make everything snug as there will be no draughts up through the hive.

7th. Question. As to amount of pollen in hive. Leave all pollen possible. And in addition we supply artificial pollen with cotton seed meal or ground oats or regular ground horse feed placed out in dishes before natural pollen comes.

8th. Question. As to size of entrance and method of ventilation. I leave entrance full size, full width of the hive generally, unless we contract for robbers or something

like that. Use your own judgment about that; as to ventilation, I never give any where our bees are in under cover out of the sun, as they are with us. I let the bees tend to that. I have placed some of these double hives in terribly hot attics, but they seem to do equally as well as where it is not so hot.

This I think answers all your questions quite fully. I hope it will be a help to you in getting started right.

In conclusion you will notice I always use and recommend for a brood chamber two 8 frame standard hives, one above the other always.

With best wishes, I am.

Yours truly,

J. A. PEARCE.

1542 Hampshire Rd.,
Victoria, B. C., Can.
October 19, 1914.

J. A. Pearce, Esq.,

Dear Sir:

Last spring I got from the Fruit Belt Publishing Co. a copy of the "Pearce Method of Bee Keeping." I was so impressed with the simplicity of it that in the beginning of May I bought a hive of bees. They seemed very strong as there was a large volume of bees going out and in. I have never kept bees before and knew nothing about opening up the hive to see what condition they were in. I got them home and established them in my garden and after a day or so they settled down to work. On the first of June, I put on an extra hive body filled with full sheets of brood foundation and on top I put two surplus with section boxes with strips of starter. From that date the bees were left absolutely alone. To my very great surprise, on the 23rd of June they threw off a large swarm, which I was fortunate enough to hive without much trouble. Now, what could have caused them to do that? They could not possibly have filled the extra hive body, as it had been on only three weeks and even if they had, there were the two supers, but there was nothing in them. They had not even started to draw comb. The hive body, however, is full of fine, dark honey, all of which I am leaving so as to have a fine, strong colony in the spring.

Then, as to drones, when should a drone trap be used? In the hot days

of July there seemed to be as many drones as workers coming out of the hive, so I bought a drone trap and in three applications I killed over 2,000 by actual count. Did I do right? The more I work with bees the more fascinated I get and although I got no returns this year, except the swarm, I look for big returns next summer, if all goes well. If you have any other literature on beekeeping kindly let me know, as I would like to get it.

With kind regards,

Yours sincerely,

L. O. PATERSON.

Rural 1, Grand Rapids, Mich.,
October 31, 1914.

Mr. L. O. Paterson,
1542 Hampshire Rd.,
Victoria, B. C., Can.

Dear Sir:—

Your very interesting letter of October 19 is at hand and I hasten to reply to your questions. The reason your bees swarmed was because you did not put your second body on soon enough. It should have been put on when you established your swarm. Then the bees would have drawn out the foundation for the queen to deposit eggs in and would have had it full of brood in advance of the honey flow, and then when the honey flow came on, the bees would have been obliged to put the honey in the sections as there would have been no other place to put it. But not having this body on till the honey flow came on, the bees immediately proceeded to fill this upper body with honey as fast as this foundation was drawn out. In case honey is coming in the bees will proceed to fill all available space, regardless of everything, and filling this body with honey restricted the space for the queen to the lower body and made it as if the upper body had not been put on. As regards to any increase of capacity for the queen, as soon as ever so little honey is deposited in the cells they are of no use to deposit eggs in. Therefore, as soon as the queen becomes hampered for space to lay, queen cells will be started and swarming will be the result. The honey cases being empty and undrawn did not relieve the difficulty any, as the queen would not go up there to deposit eggs and the honey flow likely was over about the time the large body was filled. And swarming coming at about this time

so depleted the bees that later not much more surplus would be gathered. So the way to prevent swarming and secure a large honey supply is to have a large brood chamber and have plenty of surplus cases on early. I feel sure you will now understand this.

In regard to your having so many drones, your original hive must have contained a larger amount of drone comb than it should.

Hoping this will be satisfactory, I am,

Yours truly,
J. A. PEARCE.

Field Notes from Iowa

By J. W. STINE, Stockport, Iowa

I had a rather trying experience with two light swarms coming out, after having moved them from Salem to Stockport the 24th of November. They were rather short of winter stores, so I had prepared some granulated sugar candied to give them, but the day was so warm that they did not wait to receive this but swarmed out and flew around awhile and then returned. I do not think these swarms would have gone back, for they had a queen that I had missed clipping her wings and I was lucky enough to see her as she came out and caught her and clipped her wings. I gave both these swarms the prepared candy and they have stayed in and are contented now. We had some fine warm sunshiny days last week, which gave my bees a good chance to fly after their thirteen mile ride in a hay rack from Salem. I placed plenty of straw underneath the hives and every swarm came through in fine shape. I expect to winter the bees in the cellar under the house. This seems quite dry and easy to ventilate.

While there was not as large an attendance at the State Beekeepers' Convention at Ames as was anticipated the program was of a high order and the short course demonstrations by the college officials and others was very interesting and help-

ful.

There are a good many beekeepers in Iowa and in other states, too, I suppose, who are like the man who was passing a church and saw an Irishman leaning against it. He asked him if he belonged to that church and the Irishman replied, "No, I'm lainin' that way, though." Many have a leaning toward our associations, but do not join or attend the conventions. We now have 150 members in our Association and we have taken for our slogan one new member for each member now enrolled by the time we meet in Des Moines next year. Do not put off until next spring or summer to get your new member, but go after him this winter. It is hoped there may be a good sized delegation from Iowa at our National Convention at Denver next February.

Following is a list of the newly elected officers:

President—Prof. C. E. Bartholomew, Ames.

Vice President—Mr. Bleasdale, Des Moines.

Secretary and Treasurer—W. S. Snyder.

Directors:

W. S. Pangburn, Center Junction.

Mr. A. P. Chamberlain, Des Moines.

J. W. Stine, Stockport.

The Secretary's Corner

GEO. W. WILLIAMS, Redkey, Ind.

The future policy and welfare of the National Association is a matter that we must carefully consider if we wish to attain the usefulness that is possible to reach. To arrive

at the proper conclusion it would be well to pause for a minute and consider for a moment why there is a National Bee-Keepers' Association, and why we are Association members.

When it was organized, many years ago, conditions were entirely different from now. There was no uniformity of hives, supplies or of methods. The markets absorbed all the product at big prices, for the public recognized the merit of honey, and there were no "Boosted" and much advertised food products competing with it. It stood on its own merits, and stood very high in the estimation of the buying public. Since the commercial conditions have become so different, honey has come to be more and more neglected in the markets and the price has suffered because of the "boosting" of other food products of inferior value and the failure to "boost" honey.

Manufacturers Have Organized

At the same time, shrewd manufacturers and supply dealers have organized the supply business, and control the hive and supply market, having by their modern business methods practically eliminated the small hive-makers and dealers. This has been inevitable, and if the producers take reasonable steps for their own protection, tends to help all beekeepers, as hives and supplies have been standardized, systematized and grading the product generally adopted.

Producers Demand Recognition

At the same time, the enthusiasm of the average beekeeper has not decreased and he enjoys a convention of beekeepers as fully as he ever did. But aside from this fraternal bond, which we sincerely trust will never be eliminated from our meetings, we must recognize a growing element that must be considered; and that is the specialist who has his all invested, and must protect it. We have hundreds, yes, thousands of this class, and they are demanding that the National Association recognize their needs.

They are asking, and I think their demands are entirely just, that the supply business be conducted so that the interests of the consumer are protected and that organized efforts be taken to "Boost" their product. At the present time, the Association is powerless to do either. Narrow minded jealousy has been a serious handicap to any general effort to push the sales of honey, as many local producers have fought it, as they considered that outside honey was a detriment to sales of local products.

This is a mistake, as local consumers ALWAYS prefer, and will always pay a premium for, local products. A long article could be written on this point, but space forbids only a brief mention.

Beekeepers Cannot Afford to Attend Distant Conventions

The problem just now is to harmonize these elements, not conflicting, but diverging. The average beekeeper is a modest, retiring fellow, who is not overly well supplied with money to travel across half a continent, however well he would enjoy it after he was there. He simply can't afford to go, and pay his own expenses out of his income. But there is a class, and it is an invaluable and I am glad to say, a growing one, who can attend, as their expenses are paid by the states and government, who look at the bee and honey business through the rose tinted glasses of those who have an assured and independent income, regardless of sun and showers. These members are not directly interested in the price of honey up or honey down, but they are good talkers, and usually have things their own way, which I am glad to say is usually the right way, except that the National Association has utterly failed to measure up to the needs of the producer. As a consequence, there is a spirit of impatience among the specialists and already California has seceded and other affiliated associations are asking that steps be taken to relieve the conditions. As it now is, the National Association is helpless. At the last meeting an effort was made to change this. It is still unsettled, and it is up to the different Affiliated Associations to take the matter up and give it careful consideration.

More Funds Needed

The main difficulty the officers of the Association have to meet is the lack of funds to work with. The annual dues are inadequate to meet the expenses, let alone the "boosting" of honey to any considerable extent.

The Review has proved invaluable and we cannot afford to drop it, as we need it, and need it badly. We are very fortunate in securing the services of our able managing editor, who does the work of five men for one wage, and gives us the benefit of his profound knowledge out of his great love for the vocation. Other

men have done much, but only one, The Beloved Langstroth has given as much, with as little recompense, as our managing editor. We do not realize the self-denying efforts he has and is still giving us. I repeat, we cannot AFFORD to lose the Review.

Raise the Yearly Dues

The only recourse is to enlarge the income to meet the growing demands for funds. Other associations have done so, some charging a great many times what we pay. It has been suggested that we raise the yearly dues to \$2.00 per year, and include the subscription to the Review. There are those who would prefer to abandon the Review entirely, but this would leave us disorganized, and at the mercy of others who would not fail to use us to their profit. Whatever we do, we must not do that.

Another plan proposed is to assess each producing colony a few cents, to be used in this work. This is meeting with much favor, as it gives a square deal to everybody, except to those who will not pay. This was tried out some time ago, and failed, because of the narrow jealousies that were aroused. The manufacturers are ready to support such a plan, yet, if they can be assured that the producers will do their share. I know this to be so, for I have the assurance of many of them, in fact the most of them, and they see the need of it better than the producers themselves, as they are closer in touch with modern business. We cannot expect them to attempt this alone, and the professional honey jobbers are reaping the big profits that should go to the producer.

Officers Donate Their Services

It is the lack of money that prevents effective work being done. For instance: The officers of the Association receive no remuneration whatever and most of the time pay their own postage. Most of them are in moderate circumstances, and cannot afford, financially, to give the "Boosting" business the attention it deserves, as their bread and butter depends on their daily work. And it is enough to ask of them the necessary work required to carry on the Association. Understand me, they are not complaining, as they all are glad to do what they can, and do it willingly and freely, but I am stating a fact so the conditions may be understood.

Can You Suggest a Remedy?

Now, friends, what shall we do? Have you any suggestions to offer? The time for our state meetings is at hand and we can talk this over there and come to the national meeting at Denver or write me a letter giving your ideas of the things before us, and I will present them to the meeting if I can get there, which I hope to do, although honey money is scarce, and other funds very low, but I am thankful that for the first time in more than a year ALL of my family, grandchildren and all, are well again, and all are spared. My own health is wonderfully restored, so that I am better than I ever was, and I feel just like I could walk clear to Denver, if I had to, and enjoy it. I hope I will not have to walk all the way this time, however.

Manner of Voting

The Association has one serious proposition before it and that is the manner of voting. As it is now, this is delegated to single individuals who represent the affiliated bodies. This has the advantage of expediting the transaction of business, perhaps, but it naturally shifts the power to those who have the facilities to take the necessarily long journey required of some, no matter where the meeting may be. The ones whose expenses are paid by State or National Governments are the ones who will attend more generally than anyone else and they are not the ones who are the most vitally interested in the cost of supplies and the selling of honey. A false modesty has heretofore prevented the discussion of this phase, but it must be recognized sooner or later, and better soon than too late, after the failure of the National Association to listen to the demands of the real honey producers has driven all the "live wires" to follow the example of California.

The old way has been censured as being clumsy and inefficient, but it has its good features. The present way gives too much power to the fortunate individual who can attend, and we ought to devise some plan that has the good points of both, and as the time is limited, I will offer a substitute in this Review, so that it can be acted upon at the coming meeting. It can be amended to fit the wishes of the delegates, and offers a basis to work from.

Let Us Get Together

The coming meeting of the National Bee-Keepers' Association at Denver in February opens up the question of the possibilities of organized effort to uplift the honey business. As Secretary of the National, I frequently receive letters asking the benefits of co-operation, and the benefits of sustaining the National Association. In the past, trade and other conditions have not been favorable for the National to assist to any very great extent in the material benefit of the members. Things have changed until now it is possible to assist in a very material way to "Increase the consumption, stimulate the demand and stiffen the price of honey." Does not this appeal to you as being worth while? If you belong already, "keep boosting," and if you do not belong, get in, and we can use you. We want snappy men to give life and enthusiasm to field meetings and hold them in every state, and in different portions of the state. Get the local people interested. Have them to take a part and stir up local enthusiasm. Plans are being perfected to form circuits of contiguous states so as to arrange grand state meetings. Publicity and sales plans will be arranged and conducted

by local bee people, in an organized and systematic way. Other plans are being arranged and we trust that the honey business is to see a great awakening in the near future. If you are a local producer and have not yet developed your market to its limit, you are losing a valuable opportunity. The time is short. A honey route will be a valuable asset. The National the next year will tell you how to develop it.

Your first allegiance is to your local association, and then you owe it to yourself to join the National. If you have honey to sell it will aid you to do it. If you buy honey it will assist you. What would a railroad accomplish without co-operation and organization? What can we **not** accomplish with thorough organization? If every beekeeper, little as well as big, were to join in the general movement to more and more popularize honey, this country would consume twice the present production at a much better price. If you hang back, you delay just that much the desired results. We will all agree on this one thing if we do on no other. "Get together and 'boost' to increase the consumption, stimulate the demand and stiffen the price of honey."

More Suggested Changes of the National Constitution

The officers of this Association shall be selected as follows: Nominations may be made in the official organ at any time previous to the annual meeting of the Association and each affiliated body shall choose from this list the names of the respective persons it desires to fill the various offices to be filled. Each affiliated association shall be entitled to one vote for each ten (10) actual members in good standing in said affiliated association for said selections, and the persons receiving a plurality of such votes shall be declared to be the officers of the National Association. These votes may be presented by a duly accredited representative, in person, or by mail to the National Secretary, in which case they shall be properly attested and mailed to him

not less than ten (10) days previous to the annual session of the National Association.

Changes In the Constitution.

All desired changes in the constitution shall be published in the Review at any time previous to or not later than the October issue of said Review, and be acted on by the various affiliated associations making up the National body, and these returns shall be presented to said National Association at its annual meeting succeeding such action. They may be presented by the duly accredited representative, or mailed to the National Secretary not less than ten (10) days previous to said annual meeting. If said affiliated associations ratify said changes by a two-thirds vote of all

associations voting on said amendments such changes shall be proclaimed by the secretary and become part of the constitution.

Proposing New Legislation or Amending or Annuling Old.

Any affiliated association in good standing with the National may propose new bylaws or propose to amend existing ones at its regular annual session, and if said new laws or proposed change is endorsed by a majority present at the meeting of said affiliated association, it shall be pub-

lished in the Review, and if at any time within one year from the time of said publication it shall be endorsed by two-thirds of all the affiliated associations belonging to the National Association, said new law or change in existing laws shall be made by the National Association at its succeeding annual session. If said National Association neglects or fails to do so, the National Secretary shall announce the result of such action in the Review, and such laws or changes shall immediately be in force.

Notice to Secretaries and Delegates and Others Who Will Attend the Denver Meeting

Memorandum No. 1

To the Affiliated Associations of Bee-Keepers:—

With pleasure I greet you in this, your annual meeting, and it would afford me still greater pleasure to meet with you in person, as I surely meet with you in the spirit of endeavoring to uplift our beloved vocation.

In our efforts to enlarge the sphere of usefulness of the Association, there are conditions constantly arising that require changes in our policies to enable us to meet the changed conditions. The policies of 20 years ago are not competent to the requirements of today and especially is this true in the methods of publicity for food products and it is our needs in this direction that I wish to especially call your attention to.

In our product we have a delicate, wholesome, delicious, cheap and nutritious article, relished by everybody, especially valuable as a food product, and unsurpassed for a table garnish—yet we have seen it gradually decrease in comparative price and consumption until it is scarcely profitable to produce it in many localities. It must be our business to “get together” and discover the cause, and remedy it so as to place HONEY where it really belongs, at the head of the list of good things to eat, in price and use.

As Secretary of the National Association it devolves upon me to point out this condition and the need of early attention, and then it is for the bright minds and wise counsels of the associations to suggest the

proper policy to remedy the unsatisfactory condition.

I would suggest that one session of your meeting be devoted to the consideration of this matter in the endeavor to formulate a policy “To increase the consumption, stimulate the demand and stiffen the price of honey.” Keep this prominently before your members at all times and in all ways endeavor to “boost” sales; induce more people to eat more honey; give live bee demonstrations on every possible occasion; (by the way, you can get good prices for this at fairs and department stores). Advertise in your local papers; talk bees and honey to everybody who will listen; everybody keeping everlastingly at it will bring results before we realize it.

Another thing that appeals to me is to have more of the real worth of the Association done at the state and local meetings. I am a firm believer in the wisdom of the majority rule. The state meetings are closely in touch with the real producers and their needs, while the National is made up of delegates and members whose incomes do not depend directly on the price of honey up or honey down, and consequently their point of view is different, however sincere they may be.

Memorandum No. II

Another matter that demands attention is the need of more funds to take care of the increased work required as the methods become more and more intensive. Competition with other and better advertised foods is

(Continued on page 28)

The National Bee-Keepers' Association

And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
Amherst, Mass.
 FRANK C. PELLETT, Vice-Pres....
Atlantic, Iowa
 GEORGE W. WILLIAMS Sec.-Treas-
 urer.....Redkey, Ind.

Directors

DR. BURTON N. GATES, Chairman
Amherst, Mass.
 E. D. TOWNSEND....Northstar, Mich.
 J. M. BUCHANAN.....Franklin, Tenn.
 WESLEY FOSTER.....Boulder, Colo.
 GEORGE W. WILLIAMS..Redkey, Ind.
 E. G. CARR.....New Egypt, N. J.

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
G. M. Frizzell Temple Ariz.
 ADIRONDACK—H. E. Gray.....
Fort Edward, N. Y.
 COLORADO—Wesley Foster.....
Boulder, Colo.
 CHICAGO-NORTHWESTERN—L. C.
 Dadant.....Hamilton, Ill.
 HAMPSHIRE—HAMPDEN—FRANKLIN
 Dr. Burton N. Gates.....
Amherst, Mass.
 IDAHO—R. D. Bradshaw, Notus, Ida.
 TWIN FALLS—C. H. Stinson.....
Twin Falls, Ida.
 IDAHO HONEY PRODUCERS' ASS'N—
 F. C. Bowman.....Idaho Falls
 ILLINOIS—Jas. A. Stone.....
Rt. 4 Springfield, Ill.
 INDIANA—Geo. W. Williams.....
Redkey, Ind.
 IOWA—S. W. Snyder, Center Point, Ia.
 KANSAS—O. A. Keen, Topeka, Kans.
 MASS. Eastern Society of Beekeepers,
 L. J. Hawkins, 4 Emery St., Everett,
 Mass.
 MICHIGAN—F. E. Miller, East Lansing.
 MINNESOTA—F. W. Ray, Minneapolis,
 Minn.
 MISSOURI—J. F. Diemer..Liberty, Mo.

NEW JERSEY—E. G. Carr.....
New Egypt, N. J.
 N. CALIFORNIA—Alwin P. Heim..
 16, Fair Oaks, Calif.
 N. MICHIGAN—Ira D. Bartlett....
East Jordan, Mich.
 OHIO—F. R. King.....Creola, Ohio.
 OREGON—Floyd E. Smith, Dallads, Ore.
 THE NEW MEXICO BRANCH—
 Henry C. Barron, Hagerman, N. M.
 PENNSYLVANIA—H. C. Klinger...
Liverpool, Pa.
 PUERTO RICO—J. W. Van Leenhoff
 Ponce, Puerto Rico, 11 Marina, St.
 SOUTH IDAHO AND EAST OREGON—
 R. D. Bradshaw.....Fayette, Ida.
 TENNESSEE—J. M. Buchanan.....
Franklin, Tenn.
 TEXAS—H. E. Graham, Gause, Texas.
 VERMONT—P. E. Crane.....
Middlebury, Vt.
 VINTON BEE-KEEPERS' ASS'N—
E. J. Winder, Vernal, Utah.
 WASHINGTON—J. B. Ramage.....
Rt. 2, N. Yakima, Wash.
 WISCONSIN—Gus Dittmer.....
Augusta, Wis.
 WORCESTER COUNTY—J. S. Whitte-
 more.....Leicester, Mass.

National Convention At Denver, February 16, 17, 18, 1915.

The National Convention will be held at the Auditorium Hotel, 14th and State St., Tuesday, Wednesday and Thursday, February 16, 17, 18, 1915.

Yours very truly,
WESLEY FOSTER,
 Chairman.

All those interested are invited to make a display of material pertaining to beekeeping at the National Beekeepers' Association Convention to be held in Denver, Colo. February 16-17-18. In order that proper space and provisions may be made, it is desirable for those contemplating the making of displays to address the undersigned.

WESLEY FOSTER,
 Chairman.

Income and Disbursements of the Bee-Keepers' Review for the Year Ending February 1st, 1914.

Income and disbursements of The Bee-Keepers' Review for the year ending February 1st, 1914:

Income.

Balance on hand	
February 4, 1913.	\$ 443.12
Subscriptions	1,852.48
Advertising	781.01
Miscellaneous	384.99
	<hr/>
	\$3,461.60

Disbursements.

Printing	\$1,792.03
Postage and Mail- ing REVIEW...	378.20
Editor's commis- sions	646.70
Stenographer	212.69
Treasurer's bond..	5.00

Editor Attending Conventions	57.13	
Moving Review, Detroit to North Star	10.63	
Review Enveloper.	26.54	
Express on Review from printers...	20.77	
Interest on Review debt	42.00	
Advertising	20.99	
Review Office Rent	34.50	
Fixtures and Supplies	57.05	
Engravings and Photos	87.48	
	<hr/>	
	\$3,391.71	\$3,391.71
Balance on hand..		<hr/>
	\$	69.89

Memorandum No. XXIX

To the Board of Directors and Officers:

Dates and meeting place of National Beekeepers' Association Convention.

It has been determined that the National Beekeepers' Association Convention shall be held Tuesday, Wednesday and Thursday, February 16, 17 and 18, 1915 at the Auditorium Hotel, Denver, Colo.

B. N. GATES,
Chairman Board of Directors.

Amherst, Mass., Oct. 20th, 1914.

Editor Review:

I desire information as to the latest developments in shipping honey by parcel post. Have any small packages been perfected which will hold half-pounds and pounds? Would you be willing to explain these details or tell where the packages are available I am sending this letter to a number of beekeepers in an effort to summarize the parcel post packing for the benefit of our beekeepers.

Very truly yours,
B. N. GATES.

(President Gates: While we cannot furnish the exact sizes of parcel post packages you ask for, we can come very near it. You will notice in the advertising department of this number of the Review we are listing square syrup cans with 1¾" screw caps in gallon, half gallon and quarts. If there was a call for them we are prepared to furnish these cans in pints and half pints, in corrugated

paper mailing cases. The above containers hold respectively as follows, of ordinary honey: gallons, 12 lbs.; half gallons, 6 lbs.; quarts, 3 lbs.; pints, 1½ lbs.; half pints, ¾ lb. All of our mailing cases are of the telescope sort, needing no paste to set up. They are built of what is known as 175 lb. double faced stock, which is accepted by the railroads for shipments up to 40 pounds, so it will be seen that with our light package, the protection is ample. As a further precaution against damage and to comply with the parcel post regulations, those cases are built in such a manner that every side is double thickness of corrugated paper. With a fragile tag attached there has not been a single complaint of damage through the mails, and this with many hundred in use. Our cases are all built by The Hinde & Dauch Paper Co., Sandusky, Ohio, and if the reader should order direct, instead of through the National, if you would mention that they were to be made the same as those we are selling, they will then understand your wants.—Ed.)

Minneapolis, Mich., Dec. 4, 1914.

Bee-Keepers' Review:—The following officers were elected at the annual meeting of the Minnesota Bee-Keepers' Association:

President—Rev. C. D. Blaker, Minneapolis, Minn.

1st Vice-President—Rev. J. Kimball, Duluth, Minn.

2nd Vice-President—Mrs. J. A. DeLameter, Hopkins, Minn.

Secretary and Treasurer—Mr. F. W. Ray, Minneapolis, Minn.

Executive Committee—Mr. L. C. Pilcher, St. Paul, Minn.; Mr. L. F. Sampson, Excelsior, Minn.; and Mrs. M. McCabe, Minneapolis, Minn.

Yours truly,
P. J. DOLL.

The following Committee on Local Arrangements for the 1915 Convention at Denver is announced: Director Wesley Foster, Chairman, Boulder, Colo.; Mr. Louis F. Jouno, 4732 West 34th Ave., Denver, Colo., and Mr. N. L. Henthorne, President of the Colorado State Bee-Keepers' Association, Platteville, Colo.

BURTON N. GATES,
President.

December 3, 1914,

Amherst, Massachusetts.

The National Bee-Keepers' Association Convention will meet at the Auditorium Hotel, Denver, Colo. Further announcement concerning reservation of rooms and provisions for exhibitions will be made.

Room without bath, single, \$1.00 per day and upwards.

Room with bath, single, \$1.50 per day and upwards.

Excellent cafe and meal service may

be had. The hotel is convenient to all street car connections and adjacent to railroads.

The convention apparently will have ample, comfortable quarters, with a large assembly hall, reception room, committee room, etc. The reception room will doubtless be used as an exhibition hall.

BURTON N. GATES,
President.

December 3, 1914,
Amherst, Massachusetts.

National Beekeepers' Association

Preliminary Announcement of the Annual Convention and Official Meetings of Delegates from Affiliated Societies.

To be held at the Auditorium Hotel, Denver, Colo. Tuesday, Wednesday and Thursday, Feb 16, 17 and 18, 1914. To be held jointly with the meeting of the Colorado Beekeepers' Ass'n.

GENERAL ANNOUNCEMENT

The reservation of hotel accommodations should be sent to the clerk, Auditorium Hotel. Rates are announced elsewhere.

Local arrangements are in charge of "Committee on Local Arrangements" also announced elsewhere. All communications for concessions or special provisions should be addressed to the Chairman of this Committee.

NOTICE TO DELEGATES

The Secretary has mailed to each affiliated association, delegates' cards, to be used as credentials. It should be borne in mind that it is absolutely essential to send the ORIGINAL credential direct to Mr. George W. Williams, Secretary Redkey, Ind., on or before February 1.

The local committee is making full arrangements for the convenience and pleasure of delegates and members. Due announcement will be made.

EXHIBITION MATERIAL

An invitation to make exhibits is elsewhere announced.

The program will consist of official executive meetings and of a program of lectures, demonstrations, etc., but of which at this time only a preliminary announcement can be made.

PROGRAM

Tuesday, February 16

9:30 a. m.—Meeting to be called

to order and the organization of the convention.

Appointment of Committees.

Presentation of Credentials.

Report of Credentials' Committee.

Announcements and invitations.

1:00 p. m.—President's report.

Reports of Committees.

Transaction of business which regularly comes before the session.

Continuation of program of papers.

8:00 p. m.—General session of the Association for the reading of papers and for discussion.

Wednesday, February 17

9:00 a. m.—Delegates' session for the transaction of business, followed by the reading of papers.

1:00 p. m.—The program of the afternoon will consist of a series of papers concerning organization, work and co-operation of county and state association.

8:00 p. m.—Public session. At this time it is hoped to provide illustrated lectures and a program of general interest to the public. Arrangements are in hand for this.

Thursday, February 18

9:00 a. m.—Business session, concluding the transactions of the association, followed by the reading of papers.

Election of officers.

1:00 p. m.—Session for discussions and the reading of papers to be followed by adjournment.

It may be desirable to hold a

special session in the evening, of those who do not leave town that night. Special arrangements for this will be announced during the convention.

PROGRAM OF PAPERS

An effort is being made to secure the best talent in the country. Not all will be present to read their papers, but the members are assured of hearing some of the most recent and worthy remarks from the apicultural leaders on this continent. At present, however, it is merely possible to partially list these papers.

Prof. E. G. Baldwin, Deland, Fla., title later.

*Prof. C. E. Bartholomew, Ames, Iowa, title later.

*E. J. Baxter, Nauvoo, Ill., title later.

*J. M. Buchanan, Franklin, Tenn., title later.

Mr. Bull, Valparaiso, Ind., title to be announced.

D. H. Coggs, W. Groton, N. Y., title later.

*E. G. Carr, New Egypt, N. J., title later.

*C. P. Dadant, Hamilton, Ill., title later.

Benjamin Davis, Tennessee, title later.

Edgar Elthorp, New York, title later.

Robert E. Foster, Rifle, Colo., "What the County Association Can Do in Co-operative Buying."

*Wesley Foster, Boulder, Colo., "Beekeeping Costs."

N. E. France, Wisconsin, title later.

L. V. France, Wisconsin, title later.

J. G. Gustin, Missouri, "Some Legal Phases of Beekeeping."

Geo. B. Howe, New York, "Breeding Bees."

*Prof. Francis Jager, Minnesota, title later.

Allen Latham, Connecticut, title later.

J. J. Corbut, "What the Montrose County Beekeepers' Ass'n. has Done,"

J. W. Leenhoff, Porto Rico, title later.

John H. Lovall, Maine, "The Pollination of Fruit Bloom."

J. P. Merwin, N. Y., title later.

Prof. Frederick Millen, Michigan, title later.

*Frank C. Pellett, Iowa, "Inspection in Iowa."

*Prof. Morley Pettit, Canada, "The Production of Extracted Honey," "Apiary Inspection and the Disease Situation in Ontario."

*Dr. E. F. Phillips, Washington, D. C., "Development of the Honey Market."

Mr. Frank Rauchfuss, Denver, Colo., subject to be announced.

*E. R. Root, Ohio, "Migratory Beekeeping."

H. H. Root, Ohio, "Straining and Clarifying Honey."

Prof. F. W. L. Sladen, Canada, "Autumn Mating to Control Inheritance."

J. H. Stoneman, Blackfoot, Idaho, "Co-operation vs. Competition between State Associations."

Jay Smith, Indiana, "A Plea for Better Bees."

*E. D. Townsend, Michigan, "A Competency from the Hive."

*Geo. W. Williams, Indiana, "Honey Publicity."

Author and paper to be announced (Contributed by a member)

(Continued on page 34)

Annual Meeting New Jersey State Beekeepers' Association

TO BE HELD AT THE ENTOMOLOGY BUILDING, NEW BRUNSWICK, N. J., JANUARY 13, AND 14, 1915

JANUARY 13TH, 10:30 A. M.

Reading of Minutes.

Report of Secretary-Treasurer.

"Double Walled Hives vs. Single Walled Hives and Winter Cases," C. H. Root, Red Bank.

Round Table discussion.

2 P. M.

"Spring Feeding," G. F. Neipp, Chatham.

"Blocking Up to Prevent Swarming," Harold Hornor, Mt. Holly.

"Increasing the Membership," C. D. Cheney, Hoboken.

Round Table discussion.

7:30 P. M.

"The Need of Additional Legislation," Dr. Headles, New Brunswick.

"Retailing The Crop," H. T. Kille, Swedesboro.

Round Table discussion.

JANUARY 14, 9:30 A. M.

"Raising Honey for a Livelihood," C. H. Root, Red Bank.

"Lessons from the Hartford Honey Show," E. G. Carr, New Egypt.

"Swamp Bee-Keeping," S. Powers, Wading River.

Round Table discussion.

Election of Officers.

Election of Delegate to National Convention.

Election of Delegate to State Board of Agriculture.

"Reminiscences," W. W. Case, Frenchtown.

Round Table discussion.

Samples of 1914 honey crop for display will be appreciated.

Let everyone come prepared to take part in discussions and help, and be helped.

OFFICERS

C. H. Root, Red Bank, N. J.

President

Harold Hornor, Mt. Holly, N. J.

1st Vice President

Dr. C. D. Cheney, Hoboken, N. J.

2nd Vice President

J. H. M. Cook, Essex Fells, N. J.

3rd Vice President

E. G. Carr, New Egypt, N. J.

Secretary-Treasurer

A Suggestion to Obtain Funds for Honey Advertising

BY BURTON N. GATES, President

Your President begs to submit to the Directors, officers and others interested, for consideration, the following statement which is attached to Memorandum No. XXXIII. He would appreciate it, however if you will give brief, concrete suggestions of approval and disapproval. You will see, moreover that this outline is elementary and not detailed. The exact machinery of administration and policy of advertising, etc., is purposely omitted.

Your Chairman feels that a publicity campaign for the advertising of honey by the Association should be very carefully set forth before it is attempted. It should be definitely understood what funds are or might be available and how these could be secured and maintained. The next question arising is as to their administration. Without casting any reflection, the writer is fearful that previous attempts of the Association to advertise honey have lacked in concrete planfulness.

Obtaining Funds

I propose that the Association purchase a carefully designed and attractive poster stamp of a specific denomination, perhaps one cent, or denominations: that these be deposited with a reputable banking concern, possibly a national bank from whom alone they should be purchasable.

There is something peculiarly intrinsic in a stamp. It pleases young and old. People like to use them, excepting of course a war "revenue stamp" when there is no

war. But seriously the issuing of stamps is commercial as compared with begging or soliciting and it is as explained below, not transitory.

Use of the Stamps

As above intimated, these stamps would be used largely by producers and handlers of honey, from the man owning an apiary, to the small grocery retailer perhaps. The commission house man, the bottler and jobber, might be expected to secure stamps to be used, if not upon his packages, upon his stationery. The possibilities for their utilization are somewhat limitless and are measured largely by the interest which could be aroused in their utilization and the proper benefit derived from the resulting publicity. The publicity would naturally be measured by the efficiency of the publicity man employed by the National Association and the available funds for it.

The Feature of the Bank

You may have wondered why I would propose to deposit the stamps with the bank. It is for two reasons: First, absolute integrity and solidarity. This is not a reflection upon treasurers or officers of the Association, but has its value in its moral effect more particularly upon the community or those purchasing stamps. Second, it centralizes the disposition of stamps and moreover, saves bookkeeping because the bank would do it for us. I have, moreover, a precedence of such a policy and, again, upon consulting a banker here find that without doubt banks would only be too glad

to do this for the Association. It would advertise them and at the same time give them a considerable amount of money. The feature of the bank, then, is an important one.

The process would be that the Association would buy stamps and deposit them with the bank. The bank then would be able constantly to furnish a statement of sales (which would represent funds available for advertising purposes) and the balance of stamps on hand. A little experience from month to month or from year to year, would enable those in charge to forecast their funds and plan their campaign accordingly.

Source of Revenue

The source of revenue by the process outlined would be relatively in proportion to the amount of business done by the individuals who purchase stamps, or to their interest in apicultural affairs and advancement of honey sales. It is, moreover, a business transaction and differs from the usual process of soliciting funds. People do not like to be solicited. This occurs all along the line in every day life and has come to have bad flavor, which should not be a contamination of even the sale of so wholesome a product as honey. A business transaction, therefore is far more preferable especially so as the policy outlined equalizes the taxation and does not bring a particular burden upon any few individuals. It also inspires or stimulates successive contributions in the way of buying more and more stamps. It is too, perpetuating from year to year consequently the revenue derived might be expected to be accumulative.

The Policy of Advertising

Heretofore the beekeepers have merely concluded that the National Association should advertise honey. I gravely fear that they have not considered the financial responsibility in doing this. Neither have they considered advertising in the light of a trade or profession. It would therefore be the writer's idea provided this policy should be inaugurated, to definitely plan an advertising campaign in proportion to the prospective funds available. It should be further suggested that the most competent, professional advertising available should be had.

It is a difficult problem and should not be handled by a layman or one inexperienced in advertising of wide scope.

You readily see, therefore, that the exact machinery of the advertising policy is not worked out, and at this time is not pertinent. The general policy of the securing of funds is what is concerned.

It should not be forgotten, however, that before the first step is taken towards collecting any funds, the public must be assured of efficiency, otherwise this method would be merely a repetition of what has gone before, namely a partial or whole disappointment to the beekeepers. DEFINITE SATISFACTION TO THE PURCHASERS OF STAMPS MUST BE ASSURED.

The Scope of the Country

A very important feature in the administration of such a project by the National Association is the scope of the country. Few except those who are in such work realize the difficulty which a vast country like the United States offers. The markets differ; localities differ in their demands. The advertising manager would, therefore, necessarily need the pulse of the honey market. For a moment, imagine the vastness of this necessity and the seeming handicap which it would place upon attempting the advertising problem of nation wide scope.

It would, therefore, seem pertinent that the advertising manager should have had previous experience of nation wide advertising problems.

Summary

In conclusion, I hope that this may be an humble suggestion to you, whereby the vexing problem, confronting the National Beekeepers' Association may, with your assistance, be solved. The writer, therefore, solicits your suggestions in concrete, brief form. If sufficient interest is shown in this policy, the Directors of the Association will be presented a statement for action, which the writer hopes may be obtained perhaps prior to the National Convention at Denver, in this way, material progress and perhaps a significant boom of the National Association for 1915 may be forecast.

BURTON N. GATES,

President.

Honey Resources of New Jersey

E. G. CARR, New Egypt, N. J.

Given at the National Beekeepers' Association Meet. St. Louis, February 19th, 1914

When we Jerseymen see in the Bee Journals the map of our state and three or four others as well placed upon such a state as Texas with a liberal amount of large remnants to spare we wonder if we are large enough to attract any attention whatever as honey producers still we recall the saying that the best goods sometimes come in small packages and are encouraged to make as much little noise as possible.

Although New Jersey is near the small end of the list of states when size is compared, when the diversity and quantity of nectar secreting plants is considered it occupies no mean place in the list.

Because of the diversity of the landscape—sea shore, lakes and hills, upland and meadows the flora of the state is very rich and its nectar secreting and pollen bearing flowers abundant. While not all are of consequence because of the LARGE amount of nectar which they furnish, great numbers are helpful at some season in furnishing either the surplus honey or the food to rear the surplus honey gatherers.

Beekeepers are apt to lay stress on the presence of some SURPLUS honey plant and ignore the numerous blossoms which furnish the nectar in small quantities perhaps, but that which is so much needed for rapid brood-rearing, for, no matter how well supplied a colony is with stores a little new nectar has a very beneficial stimulating effect.

When therefore honey resources are considered it is well to take account of the more important blossoms which secrete nectar for brood-rearing as well as those which give the surplus.

I shall name the different honey resources as nearly in their order of blooming as possible.

Usually the first blossoms on which the bees work in the spring in New Jersey to any extent are

those of the maples which give both pollen and nectar in liberal quantities. Sometimes enough nectar from this source is gathered to seal in colonies already well supplied with stores. This is a fairly reliable and regular yielder although subject to damage by frost some seasons. The elms and willows now come in bloom and the bees hold high revel while these last. After these there are a variety of early blossoms, none very conspicuous for a considerable amount of nectar until fruit blossoms open, when, the weather being favorable the bees are able to gather somewhat more than enough for their immediate needs. Although considerable interest is being shown in orcharding in New Jersey at the present time, one orchardist having 450 acres planted to peaches and apples, still these have no particular attraction to the apiarist as a surplus honey source, at the same time their value to furnish the new nectar so necessary for best results in brood rearing is fully appreciated.

There is a light but fairly steady flow between fruit bloom and clover thus making it unnecessary to provide artificial stimulation to guard against a slackening of brood rearing at this critical time as is the case in some states.

After fruit bloom there are a number of wild blossoms leading up to locust (*Robina psoudocaeia*) the next blossom to furnish surplus honey. This occurs in a number of places in the central part of the state and furnishes a most delicious honey in large quantities some seasons but is such a fickle yielder the beekeeper can safely make any plans in which this honey resource figures. Locust is followed by tulip poplar (*Liriodendron tulipifera*) which occurs generally throughout the state. Although this yields well the nectar is quite dark and high flavored and immediately pre-

cedes the clover flow often being mixed through the first superful so as to lower the grade of the whole first super unless the beekeeper is very careful to so plan the surplus room that this darker honey goes into the brood nest instead of the surplus apartment. The bees seem to prefer the clover rather than the poplar and desert the latter when the clover gets to yielding well.

White clover (*Trifolium repens*) furnishes much of the early surplus honey in some parts of the state but the greatest clover yields if not the greatest yields from any source come from alsike clover (*Trifolium hybridum*) of which there are, it is estimated, in the state at present, approximately 25,000 acres and thousands of these acres are untouched by honey bees and from which could be gathered tons of honey which in quality will compare favorably with honey produced anywhere.

Since New Jersey has such a large acreage of low lying land on which alfalfa cannot be successfully grown and on which alsike flourishes there is no prospect that this acreage will be reproduced but rather it is expected that it will increase with the increased dairying interests as alsike makes a hay particularly liked by dairymen.

One hundred pounds of extracted alsike is considered a fair average crop but with good management and good bees this should be considerably increased.

The next honey plant of importance is *Clethra Alnifolia* known locally as Sweet Pepper bush, August flower, soap, arrow wood, etc. This is a woody shrub growing from two to eight feet in height and is found from the central part of the state southward to the cape, flourishing in and about the cedar swamps and produces a light honey of pleasing slightly aromatic flavor and yields of 125 sections per colony are reported from this source. This comes into bloom about the last of July and lasts four or five weeks.

Some surplus is gathered from sumac in the upper part of the state in July.

The western part of the upper half of the state produces good

crops of buckwheat honey and is the more reliable locality since there are two distinct surplus honey flows and should one fail there is a chance for a paying crop from the other.

The last but not necessarily the least honey resource of New Jersey is the aster (*Aster ericoides*) and bushy goldenrod (*Solidago Lanceolata*). The aster is the more important of the two and the eastern half of the northern part of the state is the more favored part for this crop. Three 32 section supers to the colony has been reported from this source after September tenth.

Taking all things into consideration we believe that New Jersey honey resources offer a splendid inducement for the commercial beekeeper and this is confirmed by the experiences of the very few who have gone into the business to any extent. As an example of what can be done by a progressive beekeeper in New Jersey, in 1912 a beekeeper running about 250 colonies in eight yards for both comb and extracted honey harvested nearly ten tons and disposed of it so as to clear \$2000. Another the past season from 46 colonies spring count took 6,800 pounds of white honey and increased to 96 colonies. These cases show that New Jersey honey resources are good needing only the practical beekeeper to get the profitable results.

It may seem absurd to speak of migratory beekeeping in so small a state as New Jersey but we believe it can be profitably followed by locating in an alsike clover district for the clover flow ending about July tenth, then moving thirty miles to the cedar swamp section in time to catch the clethra flow, again moving sixty-five miles to the aster district about September fifth, moving back to the clover district thirty-five miles for wintering. This would give the three distinct surplus flows and would prove profitable to one who can handle such a proposition.

Don't fail to read the wonderful clubbing rates on another page of this number.

Read our Clubbing rates.

Development of Bee Culture in Oregon

BY H. F. WILSON, Entomologist, Oregon Agricultural College

Just when the first bees were brought into Oregon I am unable to say. However, an investigation along this line indicates that the first bees were imported in 1849, from California. These bees were sold to local buyers at \$125 a colony. Other bees were imported at various times during the fifties and sixties, and at the present time many bee trees can be found throughout the state. One of the most interesting facts along this line is that in several localities pure Italian bees can be found in a wild state, and living in hollow trees, etc.

Just how many colonies have been imported into the state at different times we cannot say, but apparently most of the bees now present in western Oregon have developed from bees imported by the early settlers. In eastern Oregon bees are usually imported in car load lots.

With such data as we have at hand, it would be impossible to estimate correctly the status of beekeeping in Oregon. Many farmers keep from one to several stands for home use, and in all parts of the state one may find from a few to many colonies that not only furnish honey for the home but also give a market surplus.

In looking over the data secured in a recent survey, one might be led to infer that most of our honey is produced in Southern Oregon, but that inference is misleading. The division known as Central Oregon probably has the greatest number of large commercial apiaries, with the Columbia Basin second and Southern Oregon third. These facts are not shown in the survey, for the reason that it

was taken as a general farm survey, and of the five or six commercial apiaries in Southern Oregon, the largest happened to be recorded. In the survey of Central Oregon it so happened that out of a dozen or more commercial apiaries, only two, of medium size, were recorded. With these exceptions, other data at hand shows that the average that was arrived at is fairly representative of existing conditions. According to the data in the accompanying table, 402 farms reported bees; a total of 1,637 farms were visited, so that on an average, one farm out of every four has bees.

The U. S. Census for 1910 reports one farm in every five as having bees, but during the last two years the number of colonies has increased both in the number of large apiaries and in the number on small farms. A considerable increase is due to the number secured by orchardists for pollenization purposes.

With data on hand and the figures from the U. S. Census Report for 1910, a distribution map has been made which shows some very interesting facts. Each figure represents 1,000 colonies, showing an approximate total of 50,000 colonies, with a value of \$250,000. The writer believes that with the present average prices, an average of five dollars per colony is not too high, although the census report gives the total valuation of 47,285 colonies at \$150,164.

Of the 50,000 colonies, less than 20,000 are found outside of the Willamette Valley and Coast Divisions. Apparently, then, the honey industry is in western Oregon, but in reality

Statistics on Bee Culture

Based on 402 Reports

Division	Number Reports	Number Stands	Beekeeping Successful		Colonies Profitable		Average Price of Honey		Sales Total
			Yes	No	Yes	No	Comb	Extr'd	
Coast Division.....	75	570	67	8	472	90	12½-20c	7-15c	\$ 570.50
Southern Oregon.....	70	962	55	15	829	133	12½-20c	7-15c	2,977.75
Willamette Valley....	158	833	123	35	657	176	12½-20c	7-15c	679.45
Columbia Basin.....	47	994	44	3	987	7	12½-20c	7-10c	2,367.50
Blue Mountains.....	19	407	17	2	370	37	12½-15c	7-10c	1,009.50
Central Oregon.....	33	839	33		839		12½-15c	7-10c	1,605.00
State.....	402	4605	339	63	4154	451	12½-20c	7-15c	\$9,209.70

only about one-half as much honey is produced in these two divisions as in the others. Many of the bees in the first two sections are barely self-supporting and their only value is in pollenizing the fruit blossoms. The surplus gained from the more thrifty colonies is generally small. The large number in these sections is due to the number of small farms with from one to thirty colonies.

Taking the state as a whole, individual apiaries produce from a few pounds to a carload (figured at about 40,000 pounds). The number of colonies owned by individual beekeepers varies from a few to six or seven hundred. In addition to the honey producing apiaries, there are situated at different points in the state, queen and bee-raising apiaries.

Discussing each region separately, we find that, in the coast division, some of the finest honey produced anywhere is secured from wild plants such as vine maple (*Acer circinatum*) and a plant known as fireweed (*Epilobium spicatum*). No large apiaries are found in this section and the average surplus is small. Section honey only is produced and only a small amount reaches outside markets, as the local demand is greater than the supply. In this section climatic conditions regulate to a great extent the amount of honey produced. Continued rains in the spring, during the blossoming period of fruit trees and other plants, often result in a decreased surplus.

In the Willamette Valley section, conditions are extremely variable. In the valley proper there are no commercial apiaries of any size, and in bad years many bees starve in the fall, for lack of stores. Several men in this section have found that it is more desirable to produce extracted honey, as the bees seem to gather more honey in this way, under adverse conditions. Alfalfa cannot be grown with success, and since there are not many flowering plants to be found after July first, except back in the hills, the surplus must be gathered in the spring. Continued spring rains are also a factor here and oftentimes the blossoming period of the principal honey-producing plants passes without the bees being able to spend more than a few days in gathering honey. Getting back onto the slopes of the Coast Range and the Cascade Mountains, more favorable conditions are found and a fair

surplus can usually be secured from the more variable honey-producing plants in the later blooming season.

The division known as Southern Oregon, and comprising only three counties, is different from the other sections of the state in that the region, while not arid, does not have as much rain as the Willamette Valley and Coast divisions. In addition to several wild honey plants, which grow abundantly in this section, alfalfa is grown successfully and fruit bloom offers a fine pasturage while it lasts.

The other three divisions, Central Oregon, the Blue Mountain District, and the Columbia Basin, have conditions which are practically the same so far as beekeeping is concerned. That the beekeeping industry of these sections is in its infancy can hardly be doubted by one taking a trip through those sections where alfalfa can be grown successfully. Here is also found a vast territory which at present is in sage brush, but may some day be planted to alfalfa, when it will give increased area for bee pasturage. In the vicinity of Ontario and Vale, a large alfalfa district, one can find some of the state's largest and most productive apiaries. Much of the alfalfa is grown for seed, and with the sweet clover which grows in waste places gives an ideal pasturage for bees. There are many fine apiary locations in different sections of the state, but all of these should be thoroughly investigated before an attempt is made to start an apiary in any one of them.

Notice to Secretaries, Delegates and Others Who Will Attend the Denver Convention

(Continued from page 18)

becoming keener every day, and we must look for more and more publicity for honey to protect ourselves. Some way must be provided to take care of this added expense. As it is, our yearly dues are absurdly small, compared with other associations, and we get more for our money. We get the Review, in itself worth more than we pay, and we get the benefits of the Association besides. These other associations pay \$5.00, \$10.00 and some \$25.00 for yearly dues, and with this large fee, and a big membership they have an immense working capital that enables them to boom their products and get top prices. This is the kind of competition we have to

The Review Debt Subscription List

The undersigned are the liberal subscriber-members who have contributed toward paying off our REVIEW debt. It will be noticed that we must have many more contributions to make it possible to pay off one-third of the debt this winter, as you know the time is limited that we have to pay in, according to our contract. We should at least swell this contributed list to \$250 during the next sixty days. It is up to you, subscriber-member, whether we pay the debt and own the REVIEW or not. Send your dollars to the REVIEW office. The list as subscribed to date is as follows:

Amount previously acknowledged.....	\$192.14
C. J. Oldenburg, Belle Plaine, Minn.....	1.00
W. S. Frazeur Sr., 1611 Montcalm St., Indianapolis Ind.....	1.00
W. E. Carrington, 1700 Fiske Ave., Pasadena, Calif...	50
Heartsease Apiaries, Memphis, Tenn.....	1.11
Jas. A. Stone, Springfield, Ill.....	1.00
C. L. Hays, Chicago, Ill.....	1.00
Nina Scott, Clinton, Mo.(second donation)....	1.00
Virgil Sires, North Yakima, Wash.....	2.60
C. W. Klump, Lowell, Mich.....	1.00
R. T. Rhees, Ogden, Utah.....	1.00
W. F. Schmeiske, Binghamton, N. Y.....	2.00
W. L. Cheney, Mason, Mich.....	1.00
Weber Brothers, Blackfoot, Idaho.....	4.00

Subscriptions to the Review debt are not coming as fast as we anticipated; still, we have at this writing \$210.35, the last month's contribution being the largest yet, which is very encouraging. There are still several friends who have not yet subscribed toward the debt. To such we would suggest that you let your dollar come along so we can list you in the February REVIEW. We feel proud of the above list. It is the largest one yet and several others have written that their contributions are forthcoming, so we feel encouraged. One feels good when contributing toward a good cause, and we should like to ask the honey producers where they could contribute to better advantage than toward the REVIEW debt. Let us swell the list more next month than during the preceding months. Contributions can be sent to Secretaries or to this office, as you choose.

meet, and it must be met or we will suffer. Although advertising is expensive, we do not need anywhere near such a sum as these pay, as honey has high intrinsic value, and will respond quickly to judicious advertising and the beekeepers themselves are potent factors in this, and will, when properly organized, do much by local effort. Please discuss this matter at your meeting and instruct your delegate as to your pleasure, so that he may give the National meeting the results of your wisdom, and let us make the Association what it should be, a powerful and effective means of bettering the business.

The Review is proving a wonderful help to us, in an educational way, and in aiding the producers to effect a better organization. Efforts are be-

ing made to drop it and leave us without any means of official communication. Those who are asking this may be sincere in their position, but their viewpoint is not that of the actual producer, to whom it would be nothing short of a calamity to lose the support of such a paper as the Review, a paper all our own, dedicated to the interests of the beekeepers. Every beekeeper who does not take it now should subscribe, and those who do take it should renew.

We are taking as our watchword for the year, "GET TOGETHER AND BOOST HONEY." We trust that your association will concur in doing this. Some have already started to plan out ways to do this. Get in line with them and help "do things."

In arranging the program for the coming National meeting at Denver in February, I am asking each affiliated body to co-operate with the others and select one topic of special interest to their association and which they wish to bring to the notice of the National, and delegate one of their members to prepare a paper on this topic and present it at the coming meeting. Kindly arrange for this and advise me as to the name of the topic and person selected.

With best wishes for the success of your association, I remain,

Yours,
GEO. W. WILLIAMS,
Secretary, N. B. K. A.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

James T. Johnson; R. F. D. No. 1,
Percy, Ill.
Henry J. Zinn, 1135 Who. Ave., Forty
Fort, Pa.
Rocky Mountain Bee Co., Forsythe,
Montana
H. H. Thale, Maywood, Mo.
E. S. Smith, Westville, Ind
B. F. Kindig, Elkhart, Ind.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS — Lowest price.
PEARL CARD CO., Clintonville, Conn.

White Clover honey for sale. Albert Tien, Falmouth, Mich

FOR SALE—One car Alfalfa extracted honey. Address W. H. Pennington, Ontario, Ore.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—Fine well ripened white clover honey in 60 pound cans, also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—Horsemint extracted honey. Also dark honey from Huckleberry. Put up in new 60 pound tin cans. Write for prices. A. L. KRUEGER, New Ulm, Texas.

FOR SALE—A carload of fine Clover and basswood blend of extracted honey, in New York state. Parties interested kindly address CARLOAD, Care THE BEE-KEEPERS' REVIEW, Northstar, Mich.

FOR SALE—A fine grade of Clover extracted honey; also some blended with basswood. New 60 pound net tin cans, two in a case for shipment. Sample free. Address C. D. TOWNSEND, Stockbridge, Mich.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

WANTED—Extracted honey, car lots or less. Alfalfa or Alfalfa and Sweet Clover mixed. Could use some from other sources. W. HICKOX, Forsyth, Mont.

COMB HONEY WANTED—Send your samples, prices, quantities and how put up and packed. We will pay 32c per pound for nice, clean, bright yellow Beeswax. Chas. Israel Bros. Co., 486 Canal St., New York. Established in 1875.

FOR SALE—50,000 pounds light extracted honey, well ripened and mild flavored. Two sixty pound cans to case, 7½ cents by the case, in ten case lots, even seven cents per pound in fifty case lots. Write H. G. QUIRIN, Bellevue Ohio.

FOR SALE—Untested Italian Queens. Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIREN, North Yakima, Wash.

FOR SALE—1000 colonies of bees in 10 frame hives. Located in 10 apiaries in the Imperial Valley, where crop failure is unknown. Profits for five years, have averaged more than 100 per cent annually. Owner retiring from active business. J. Edgar Ross, Brawley, Calif.

COMB HONEY wanted at all times. Also Potatoes, Onions, Beans, Cabbage and Fruits. W. W. Marmaduke, Washington, Ind.

BEE SWAX WANTED—Will pay 32c and Freight or 33c Trade. Send for prices on Bee supplies. W. D. SOPER, Jackson, Mich.

FOR SALE—Extracted clover honey thoroughly ripened and of fine quality. Put up in new cans two in one case. JOS. HANKE, Pt. Washington, Wisc.

FOR SALE—Choice Aster Honey, with rich and delicious flavor, packed in 60 lb cans, two in a case, @ 7c. per pound, F. O. B. H. C. Lee, Box 254, Brooksville, Ky.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

BEEES AND QUEENS

FOR SALE—Ninety-four colonies of bees in nine frame hives. Also about 200 supers and other equipment for working them. Address A. S. CROTZER, Lena, Ill.

FOR SALE—25 colonies of bees heavy with stores that will be sold at a bargain. No disease. Write for further particulars. Address G. M. Withrow, Mechanicsburg, Ill. tf

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. Beebe, Mosinee, Wis., Route No. 1.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5¾ in. depth supers nailed and painted (220-10 fr. 40-8 fr. ext. sup. 5¾ depth 59-10 fr. 10-8 fr ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address WM McKIBBEN, Ontario, Ore.

PURE ITALIAN QUEENS June to October, mothers chosen from 150 colonies whose bees are most noted for hardiness gentleness and honey gathering. Drones as well as queens are pedigreed from the best queens obtained from a dozen different breeders of high repute.

1 Queen..... .75
1 doz.....\$7.20
4 doz. or more.....50 cents each

J. H. HAUGHEY, Berrien Springs, Mich.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—300 lbs. unhulled yellow sweet clover seed. L. P. Holms, Newcastle, Wyoming.

We have at Plano, Ill. 200 lbs. unhulled white sweet clover seed that we can furnish at 13c per pound. You should order 50 lbs. or more to get this rate. Order through the Review office.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

A sober young man who has had experience, desires a position in beeyard for next season. Address 1915, The Bee-Keepers' Review, Northstar, Mich.

We have for sale at Plano, Ill. 100 lbs of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb., in 50 lb. lots or more. Address The Bee-Keepers' Review, Northstar, Mich.

WHITE SWEET CLOVER SEED—10,000 pounds unhulled at 12c per pound, 8,000 pounds hulled cleaned seed at 20c per pound sacks 25c extra. Immediate shipment. B. F. SMITH JR., Cowley Wyo.

FOR SALE—Twenty-five colonies of heavy, healthy bees. Forty comb honey supers complete. Empty bodies, etc. Two incubators. Two horse engine, with saw and feed grinder. Address G. M. Withrow, Mechanicsburg, Ill.

RAW FURS—Honest grade and full market price shipments held separate on request. I pay charges on lots worth \$10 or over. You get value rec'd when you ship so ask for price list and mention Review. GEO. KRAMER, Valencia, Pa.

White Sweet Clover Seed

We have for sale in Buhl, Idaho, a quantity of unhulled white sweet clover seed that we can furnish as long as it lasts at 12c per pound on track there. Also some Hulled white at 20 cents a pound there. To get these low prices the order should be for not less than 50 pounds of one kind. Address

THE BEE-KEEPERS' REVIEW
Northstar, Michigan

We have a quantity of white sweet clover seed at Buhl, Idaho that we can furnish our members as long as it lasts at 20c a pound of Hulled seed and 13c for the unhulled variety. You should order 50 lbs. to get this low rate. Address THE BEE-KEEPERS' REVIEW, Northstar, Mich.

Sample Mailing Cases for Members—

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mig'rs. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express @ \$5.41. Cash with order.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

WHITE SWEET CLOVER SEED—We are getting in "touch" with several members who will harvest a considerable White Sweet Clover Seed this fall. Last season we could not get half enough of the unhulled white to supply our members. We would suggest that those wanting seed place their order early this fall, as we anticipate another season of heavy demand. You may send in \$15 per hundred pounds for the unhulled white variety, and if the price is more or less this can be adjusted at the time of shipment. Address The Beekeepers' Review, Northstar, Mich.

LABELS FOR HONEY—According to the interstate commerce ruling, honey put up for retail trade since September 3rd, MUST contain a net weight label. The little label shown here is one inch by two inches and is gummed all ready to stick to the section, or jar, as the case may be. The reading can be changed to suit each individual need without extra charge. The figures indicative of the number of ounces can be left blank, and the amount written in with a pen, if so desired. 2000, one by two inch, net weight, gummed Labels for only a dollar, postpaid. Address the Bee-Keepers' Review, Northstar, Michigan.

This Honey produced by

HOMER G. SMITH
Parkville, Mich.

It contains 14 ounces of HONEY
exclusive of wood.

FOR SALE—At reasonable prices for cash and terms, very fine Apple Orchard in bearing, located in the GREAT PE-COS VALLEY. Will sell in 5, 10 and 20 acre tracts, full water rights in Northern Carrol. Clear title. Will sell my home place, that is nicely improved. Have some valuable vacant acres to dispose of. Also a fine small Alfalfa farm, fairly well improved. All of this property lies in or close into the town of Hagermon, N. M., a growing little city of 500 people.

Will sell 50 to 100 colonies of healthy BEES with each tract of land if desired, or will sell BEES separately. This is the land of Sunshine, a country of the BIG RED APPLE, ALFALFA and HONEY. A failure in crop is unknown. The elevation is 3500 feet, a residence here is a sure cure for Asthma, throat and lung trouble. Reason for selling, Owner retiring from active work. HENRY C. BARRON, Hagermon, New Mexico.

Shall the National act as brokers in the purchase of Beekeepers' Supplies for the members during 1915?

This will depend upon how you instruct your delegate to vote at the next February meeting, for it will be up to that august body to accept or reject that clause of the proposed change of our National Constitution, as well as other proposed changes.

"The Pearce Method of Beekeeping"

The Pearce method of Beekeeping is now being revised and brought up to date. The first edition of 5000 copies have been some time out of stock and Mr. Pearce is now rewriting the entire work and bringing it up to the very minute. It will be the same size as the old volume, but contain many more pages. The new work will be ready for delivery by early spring. Price 50c post paid, or clubbed with a year's subscription to the Review for only \$1.10.

Address the sole agents

The Bee-Keepers' Review
Northstar - Michigan

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

Try My Famous Queens

From Improved Stock

The best that money can buy; not inclined to swarm and as for honey gatherers they have few equals.

3-Band Golden, 5-Band & Carniolan

Bred in separate yards, ready March 20. Untested, one, \$1; six, \$5; 12, \$9; 25, \$17.50; 50, \$34; 100, \$65. Tested, one \$1.50; six, \$8; 12, \$15. Breeders of either strain, \$5. Nuclei with untested queen, one-frame, \$2.50; six one-frame, \$15.00; two-frame, \$3.50; six two-frame, \$20.40; nuclei with tested queen, one-frame \$3.00; six one-frame, \$17.40; two-frame, \$4; six two-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction, and prompt service guaranteed.

D. E. BROTHERS, Attalla, Ala.

WHY THE YOUTH'S COMPANION SHOULD BE IN EVERY FAMILY

"If I could take only one paper," said the late Mr. Justice Brewer of the Supreme Court, "It would be The Youth's Companion—a little of everything in a nutshell, and unbiased." The Companion is a family paper in the completest sense. It provides reading that, without failing to interest the young, still interests the mature. It unites young and old through their common enjoyment of delightful fiction, agreeable miscellany, and the clear exposition of public questions.

So carefully is it edited, so varied are its contents, that it would easily supply a family with entertaining fiction up-to-date information and wholesome fun, if no other periodical entered the house.

If you are not familiar with The Companion as it is today, let us send you sample copies and the Forecast for 1915.

New subscribers who send \$2.00 for the fifty-two issues of 1915 will receive free all the remaining issues of 1914, besides a copy of The Companion Home Calendar for 1915.

THE YOUTH'S COMPANION

144 Berkeley Street, Boston, Mass.
New subscriptions received at this office.

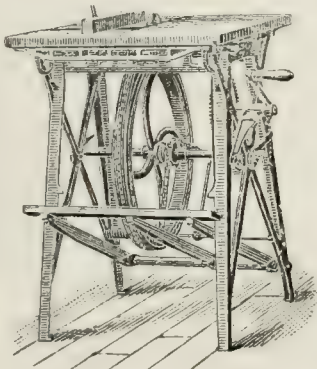
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10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 seller must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four. Your money refunded if not satisfied.

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MAKE YOUR OWN HIVES

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is THE
Very Best
BEE SUPPLIES**

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BEST of all Supplies
BEST prices you will get for
your honey when put up in
our sections and shipping
cases. "LOTZ" sections and
shipping cases have stood the
test. Why? Because they
are perfect in workmanship,
quality and material. Buy
Lotz goods when you want
the Best, Our 1915 catalog
ready Jan. 15, send your name
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It is the official organ of the Ontario Bee-Keepers' Association and has incorporated with it the former Canadian Bee Journal.

Bee-Keeping and Horticulture in its various branches are effectively combined to form a live, attractive, and practical monthly magazine.

Well illustrated and up-to-date.
Subscription price postpaid—

Canada—\$1.00 a year.

United States, \$1.25 a year.

Foreign, \$1.50 a year.

Sample Copy sent free on request.

**The Horticultural Publish-
ing Co., Limited**

Peterboro, Ont., Can.

National Beekeepers' Association

(Continued from page 22)

ber of the Office of Markets, U. S. Department of Agriculture.

A. Y. Yates, Connecticut, "The Educational Value of Beekeepers' Associations."

*Expected to be present.

A considerable number of other contributions have been solicited and are anticipated.

EXHIBITS

It is impossible to announce the exact nature of exhibits, but supply houses, glass and can manufacturers, as well as others are making arrangements.

BURTON N. GATES,

President.

Amherst, Mass.

Mancelona, Mich..

Sept. 15, 1914.

Mr. E. D. Townsend,

Dear Sir: I was surprised to see my name in the list of those having honey for sale. I know I reported having honey for outside market but really did not intend to ask you to list me as I had so small an amount.

It is all sold so I expect my name ought to be removed.

I thank you however for listing me.

Yours truly,

E. A. STODDARD.

(Friend Stoddard: You are not alone in feeling thankful for service rendered through the REVIEW now-a-days. Most every mail brings us something from some pleased member who has reaped some advantage from being a member and especially the help we are able to give through the assistance of the REVIEW. Many are just beginning to realize the benefits to be derived from the Association owning the REVIEW. This benefit will increase as the members learn to take advantage of the opportunities we are and will be in shape to offer in years to come. The National MUST retain the REVIEW and by the eternal, will, see if I'm not right! Ed.)

Read the wonderful clubbing rates on another page of this number and subscribe today.

Try the REVIEW CLASSIFIED DEPARTMENT and get results.



10 Great Serials

full of life and action, filled with the fire of fine inspiration and followed by 250 short stories of adventure, will make

The YOUTH'S COMPANION

Better Than Ever in 1915

Then the Family Page, a rare Editorial Page, Boys' Page, Girls' Page, Doctor's Advice, and "a ton of fun," Articles of Travel, Science, Education. From the best minds to the best minds, the best the world can produce for you and everyone in the home. There is no age limit to enthusiasm for The Youth's Companion.

CUT THIS OUT

and send it (or name of this paper) with \$2.00 for The COMPANION for 1915, and we will send

FREE All the issues of THE COMPANION for the remaining weeks of 1914.

FREE THE COMPANION HOME CALENDAR for 1915.

THEN The 52 Weekly Issues of THE COMPANION for 1915.

52 Times a Year
— not 12.

Send to-day to The Youth's Companion, Boston, Mass., for

THREE CURRENT ISSUES—FREE

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We heartily recommend this FAMILY WEEKLY and make this

GREAT FAMILY COMBINATION OFFER

The BEE-KEEPERS' REVIEW
The YOUTH'S COMPANION

REGULAR
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\$1
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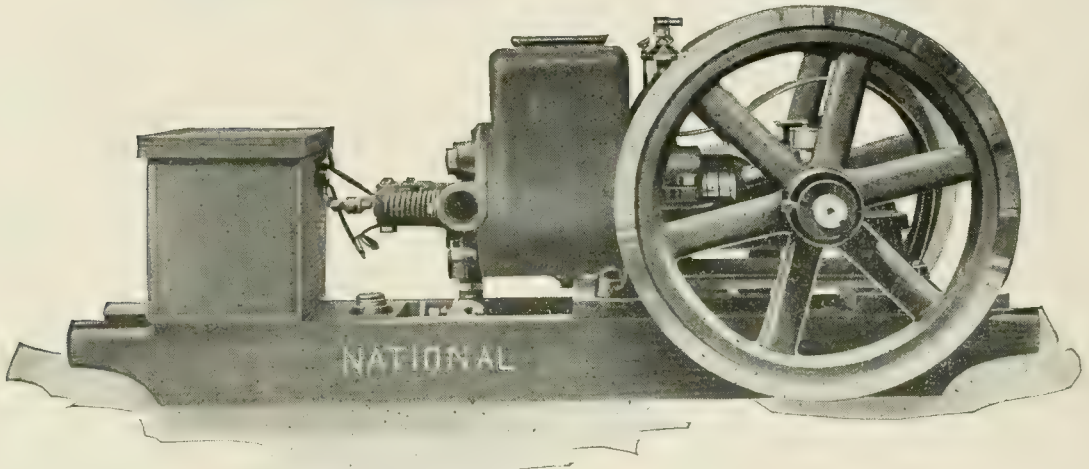
To take advantage of this club rate send all subscriptions to this office

Reliable Poultry Journal and the Review, one year for only \$1.25

The Reliable Poultry Journal is one of the very best poultry journals published and regularly sells for 50 cents a year. If you keep poultry, we would recommend the Reliable as the very best Journal for you to take in connection with the Review. Both only \$1.25 for a whole year. Canadian postage 25 cents additional. Address The Bee-Keepers' Review, Northstar, Mich.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1½; bore, 3¾; stroke, 4½; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1¼; floor space, 9x36; shipping weight 290.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n., Northstar, Michigan.



Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," or cut without reading for their letter heads, envelopes or circulars can be furnished with them for 50c each, postpaid. Address

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

YOU SAVE \$1.30

Bee-Keepers' Review	\$1.00	All Three \$2.70 TO ONE ADDRESS
Everybody's - - -	\$1.50	
The Delineator - -	\$1.50	
Total Value -	\$4.00	

This special offer—and it is a remarkable bargain—is the result of a contract we have just succeeded in closing with the publishers of EVERYBODY'S and THE DELINEATOR. By dividing the expense among the three, this low price is possible and you save \$1.30 in the purchase of the three magazines that you will perhaps enjoy more than any others this year.

The Bee-Keepers' Review

ation or not.

Needs no introduction. You will need it anyhow, whether you take advantage of this splendid combin-

Everybody's

The first plays by George Bernard Shaw ever published in an American magazine—Mary Roberts Rinehart's new mystery novel—Articles by William Hard and Hugh Black, etc.—the best 15-cent magazine in the country—this is EVERYBODY'S, one magazine that "NEVER HAS PRINTED—AND NEVER WILL PRINT—TAINTED FICTION."

The Delineator

is "The Fashion Authority of the World;" with each month a magnificent display of the advance styles from New York and Paris, supplemented by practical, helpful suggestions for materials, linings, trimmings, etc. Good stories in generous measure, splendid home departments, interesting and timely special articles, all superbly illustrated—in addition to the Fashion Display—make THE DELINEATOR the most enjoyable, as well as the most helpful magazine in America.

This special low price is time-limited. Don't lay this advertisement aside with a promise to yourself to attend to it to-morrow. You might forget. Make it a point to send your order to-day—while you are sure of that \$1.30 saving. Send your order to

The Bee-Keepers' Review
Northstar, Michigan

ORDER NOW---TODAY

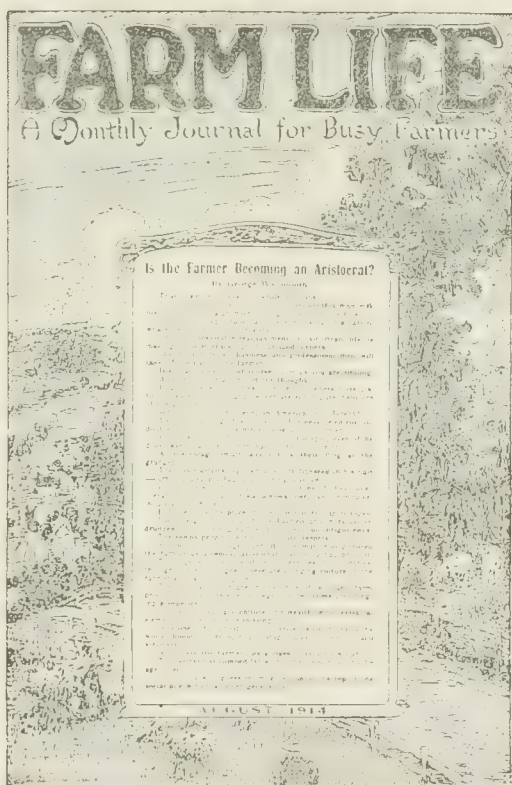
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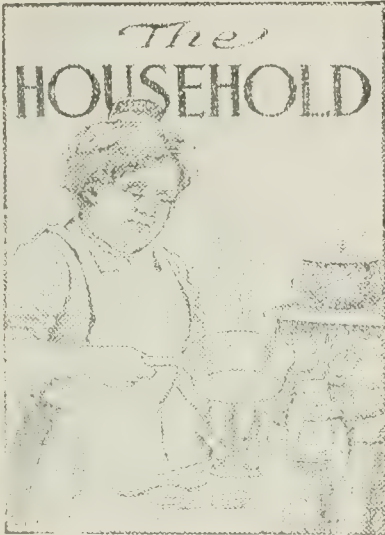
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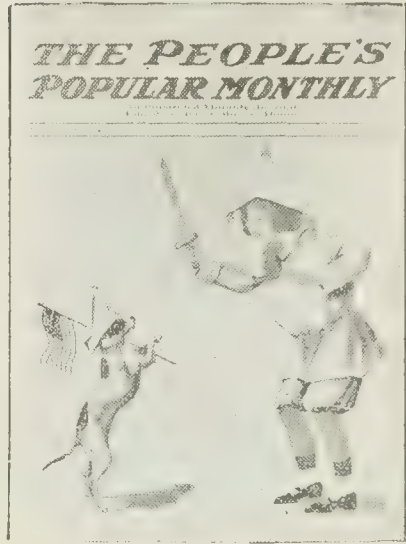


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In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them.

Six oz. Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz..	\$4 50
Gross in 2 doz. paper reshipping case.....	2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs honey, Bbl. of 21 doz..	3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at.....	2 75

Prices are f. o. b. Columbus, Ohio. [] [] [] []

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Northstar, Michigan

Note—We call the members' attention to the fact that the above prices are a considerable lower than that of the glass trust.

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50.....	\$5 50
1/2 gallon can including mailing case, per crate of 100.....	9 50
1/4 gallon can, including mailing case, per crate of 100.....	7 50

We cannot furnish less than a full crate of the above at any price.

If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$27.50 less \$5.00 or \$32.50 net.

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Northstar, Michigan

TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 0 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can ..		\$2.25	\$2.15	\$20.00
2 ½ lb. Can ..		2.75	2.60	24.00
3 lb. Can ..		3.00	2.85	28.00
5 lb. Pail \$5		4.75	4.50	42.50
10 lb. Pail 7		6.50	6.25	50.00

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2 ½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price.....	.32 per case
2 in a case, price.....	.60 per case
2 in a case in lots of 250 cases, price.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases price.....	\$58.50 per 100 cases
50 in a crate, price.....	\$10.00 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.	

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @.....	.60c per case
10 in a wooden re-shipping case @.....	.95c per case
50 in one large crate.....	\$3.50 per crate

Anything in the line of Tin containers can be furnished at corresponding prices.

One percent discount to National Members, cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

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5-gal. --Square--Round Corner--Cased Singly



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1-gal. Sqr. Rd. Cor.
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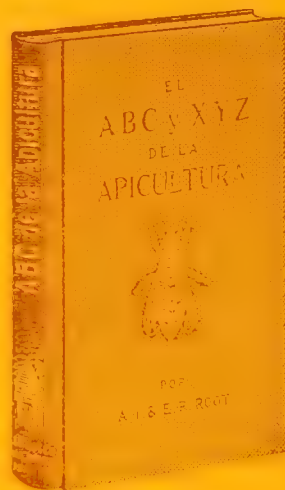
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The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a long-felt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a wide distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



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ISLAND BRED QUEENS

Did you ever lie awake nights thinking what a fine thing it would be to have your yard of bees isolated so far from neighbors, or wild bees that no mixing would occur? You could then breed queens from your very best stock and KNOW they would be mated with the very stock you wanted. Don't you see this would make it possible to select your breeding stock to suit yourself, breeding the queen from superior stock, the drones from others. The fact of the case, is, you would have this breeding proposition "under your thumb." The REVIEW has made arrangements with a firm who rear queens under identically the above condition, isolated on an island where there are no bees to interfere, and we will offer our readers queens from this stock during the coming season. This three-banded Italian stock is distinctly a honey gathering strain, and is direct from colonies that gave a surplus of 300 lbs. per colony, during a twenty-four day flow. This strain of pure Italians have been carefully bred up under these favorable circumstances for years, and without a doubt are much superior to any imported stock one can buy. Now it costs money to move a yard of bees to an island for the sole purpose of controlling the mating of queens, and it cannot be expected that these purely mated high grade queens can be sold at the price of ordinary stock. Although the firm who are breeding these queens for us have a thousand nuclei, or mating colonies, we look for a "scramble" after these superior queens this Spring and it behooves the party who expects to secure some of these queens to order early. Order NOW and have the queens mailed later, when you want them. We will begin mailing queens to our Southern trade the first of March, and the Northern trade as early thereafter as the weather will permit. If you want to save the trouble and risk of introducing your queens, they can be ordered in nuclei or with bees by the pound as you choose. Queens go by mail, post paid, and bees by express, not prepaid.

We quote prices as follows, shipped direct from our breeder in Florida:

Island Bred Italian Queens, shipments begin March 1st:

	1	6	12
Untested....	\$1.50	\$ 7.50	\$12.00
Tested.....	2.00	10.50	18.00
Sel Tested..	3.00	15.00	24.00
Tested Breeding Queens	\$5.00 and \$10.00 each		

Prices on Bees by the pound f. o. b. shipping point. Shipment begins May 10th:

	1	6	12
1/2 lb.....	\$1.50	\$ 7.50	\$12.00
1 lb.....	2.00	10.50	18.00
2 lbs.....	3.00	15.00	27.50

These prices are without Queens.

Prices on Nucleus and Full Colonies without Queens: Shipping now.

- 1 Frame Nucleus \$2.00; 2 Frame Nucleus \$3.00; 3 Frame Nucleus \$4.00
5 Frame Nucleus \$5.00; 8 Frame Colony \$7.50; 10 Frame Colony \$9.00.
-

Knowing this stock so thoroughly and the breeder being of National reputation, we do not hesitate to recommend this stock to be as good as money can buy, either imported or domestic. Remember we will book orders in rotation. First come, first served. By ordering now you will be quite sure of getting your queens when you want them. It is quite likely to be different, later. Order with remittance.

THE BEE-KEEPERS' REVIEW
NORTHSTAR, MICHIGAN

SPECIAL ANNOUNCEMENT TO BEEKEEPERS IN

Ohio, Kentucky, Central and Southern Indiana and the East

Having discontinued the distribution of LEWIS BEEWARE from Indianapolis, Ind. and Peebles, Ohio, we have recently arranged with

The FRED W. MUTH CO.

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for the distribution of Lewis Beeware in your territory.

THE MUTH COMPANY is one of the largest honey and bee supply houses in the country and CINCINNATI is one of the best shipping points.

With this new distribution arrangement we can serve you better in every way than we have heretofore.

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The Bee Keepers' Review.



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OFFICIAL ORGAN OF THE NATIONAL BEEKEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo. PROF EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9, 1913, at the postoffice at Northstar, Michigan, under the act of March 3, 1879.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVII NORTHSTAR, MICHIGAN, FEBRUARY 1, 1915 No. 2

We are a few days late mailing this number of the Review on account of wanting to get in material not available earlier, relative to the National Convention at Denver. On account of the Editor attending the National convention in Denver this month, and in hopes of having something to say relative to said convention in the March number, this next March number will in all probabilities be a few days late in reaching you.

Truly the winters in the south are as varied as the summers. Last year, at this time, the bees were almost hibernating, not a patch of brood as big as your hand in any of the hives, even over on the east coast, where they seem to begin breeding earlier than here, in the high pine section. Today, December 26th, the bees at the "Inrinoke" yard below New Smyrna, have all of them brood in some stages, from two frames, to brood in five frames. And, surprising as it is to

us, we found the stronger colonies actually sealing and capping honey, in the third story! It was from the silver maples, and gave a clear, yellowish honey, that was pleasant to behold and of fairly good flavor and body. You might have "knocked us over with a feather," so great was our surprise on making this discovery. It is extremely unusual at this season of the year. Have any of our readers ever tested honey they knew was from maple? (E. G. B.)

We quote from a private letter from Chairman Foster as follows: "You may depend upon it, this convention will surprise you in size, enthusiasm and hospitality." (It does begin to look as if those big western beemen were going to do things large at this National meeting, especially does it look so, when we realize they will undertake to banquet, perhaps, three or four hundred members, which may cost them a dollar a plate.—Ed.)

The Future of the Review

At St. Louis a year ago approximately two-fifths of the delegates voted in favor of turning the Review over to some friendly auxiliary, while the majority were in favor of the National continuing its publication. The element who would favor the discontinuing the publication of the Review by the National will be in Denver, even stronger than at St. Louis a year ago. This element who will oppose the publishing of the Review by the National, will also oppose all financial dealings, i. e., the sale of supplies, honey or other dealings likely to bring the National into commercialism. Their aim would be something like the proposed change in the constitution which reads: "The object of this Association shall be to promote the interests of beekeeping by the dissemination of useful and scientific knowledge concerning the care of Honey Bees and their products; the care of and marketing of hive products; to promote social relations between those engaged in beekeeping; to create and maintain greater public interest in Beekeeping and its importance in relation to Agriculture and Horticulture, and to advance the welfare of the members by all means not inconsistent with this constitution and laws hereinafter adopted." With very small emphasis on that phrase which reads "the care of and marketing of Hive products." Their aim is a noble one, and the writer would surely continue his membership in the National, were there no other object excepting those quoted from the proposed constitution.

Shall the Review be Owned by a Stock Company?

A stock company is now being formed for the purpose of buying and selling honey and beekeepers' supplies. This company will have a considerable capital behind it, and be in shape financially to do business on business principles. The Review would be in good hands, were this co-operative company to take it over, and they have expressed a desire to do so.

A Competitor of the National.

A stock company, controlling the Review, and having members besides the regular stock holders, as a co-operative association would have, might be a serious competitor of the National. There is surely no room for

two associations at the present time. There might nothing competitive result from this move, but it is well to consider the move, before venturing.

A Suggestive Move.

The writer, as delegate from the Michigan Branch of the National, will cast his vote for the National to continue the publication of the Review, as in the past. Knowing that there is some little uncertainty how the delegates will vote on this proposition at Denver, it is well to be prepared for the worst, should it come.

Under the circumstances, the writer proposed, should the National turn down the Review, that it be published **by the subscribers.** This is no experiment, for there are several papers and magazines published just that way at the present time. This would relieve the National of all responsibility, and **STILL HAVE ALL THE ADVANTAGES OF THE REVIEW THEY NOW HAVE.** On the other hand, co-operative associations would still have every advantage of owning the Review, without financing it. A board of say five directors, elected annually, by the subscribers, would have control of the Review. These could be elected by mail ballot.

During the holidays just passed it was our good fortune to enjoy a fine Deer Hunt, in the depths of old Turnbull hammock. This hammock is a cypress swamp of many miles' extent, reaching from Mosquito Inlet, above New Smyrna, down to Titusville, or lower, on east coast, and from one to six miles wide. Our "Stand" was not overly exciting all the time, and once we lifted our eyes in that deep solitude and saw, what do you suppose? You would not guess in an age! A Basswood! "What?" you say, in surprise and incredulity, "a Basswood in Florida!" Yes, it is surprising, but there are two species of Linden that appear here, one that is indigent to the west coast and one, the Tilia... that is native to the extreme N. E. of the State, and accidental further south on the east coast. So far as we know, it appears in this vicinity only in the Turnbull hammock referred to above. There it stood, lifting its gaunt, grey trunks high in the air, far overtopping the palmettos and myrtles and even rivaling the hickories and giant live

oaks. We were greatly surprised a year or two since, when we first learned that the Basswood appeared at all in Florida. It is a decided grey, not the black or dark brown of the north; but this is due partly to the dampness and mildew of that dense jungle of vines and trees and shrubs. Lichens and mosses also make it much more greyish than it would otherwise appear. But it is a lighter hue than the northern species. The name the hunters give it sounds like a small edition of a Seminole war-whoop. They call it "Wa-hoo," and it is very plentiful in Turnbull Hammock. A few beemen living near this hammock derive considerable honey from this source, and though it never blooms long enough to allow it to be secured in its purity, still it increases very materially the honey crop in certain years. Mr. Jas. H. Huskey, of Ariel, Fla., who has three yards of bees, said that one of his yards worked very freely on the basswood bloom, and that he was sure his yield was increased from this source. Tally one more for the "tree-honeys" of Florida! Show me another state where the honey comes so largely from trees. Listen to this: Maple, Titi, Tupelo, Orange, Holly, Basswood, Palmetto, Mangrove, all trees or near-trees. (E. G. B.)

The Review Sells Bees for its Subscribers

On another page of this number of the Review will be found a new department, that of assisting the subscriber in disposing of surplus bees. This department ought to help both the ones who have bees for sale and the ones who want to buy. Subscribers are invited to use this department when having bees for sale.

Mr. E. M. Rennolds, of Hansford, Fla., writes me that, under date of late December, his bees were breeding up rapidly, storing surplus, and booming generally. The cause is the wonderful pennyroyal, truly a "plant royal," to paraphrase the name. For it begins blooming early in November or December, and continues without stop until oranges bloom in the spring. It finds the hives light, in bees and honey; it leaves them heavy with both. It is the best stimulant for the early development of colonies, and itself is a fine honey plant, the honey being light in color and exquisite in

color.

In the A B C and X Y Z of bee-keeping, under this name, we have called the plant "erratic." Mr. Rennolds thinks this term does the plant an injustice, that it is one of the most regular yielders, etc. But the forest fires, started by the cattle men, all over Florida, are the cause of a very uncertain yield from Pennyroyal, just as they are in case of scrub palmetto. Mr. Rennolds adds: "It is entirely dependent upon the control of forest fires; for a plant of this pennyroyal does not bloom at all the first year, and only slightly the second year, and is at its best the third year of its age. And so I have started a crusade against the promiscuous annual burning of everything and anything that will burn, and have convinced the cattle-men that it is for their own interest to burn off the woods only once in two or three years, and results are beginning to show. I hope to keep down so much burning, but I am living over a volcano that is likely to become active any moment; some careless or mischievous person may drop a "match." Pennyroyal seems to have been very dependable the past two or three years. Its habitat reaches from the latitude of Tampa, southward. (E. G. B.)

We have received a letter from Mr. J. G. Teter, an old queen breeder and apiarist of many years' experience, now living in the winter time at Tarpon Springs, Fla., on the west coast. He tells of terrific havoc made among his working bees by the ravages of the mosquito hawk, or dragon fly, during the past summer. He adds that some stands were totally depleted, and almost all felt the losses deeply. Strange to say, his pure Italian colonies were most severely handled by the robber hordes of the air, but Mr. Teter thinks this was merely accidental, due to the more exposed position of the hives of his pure stock. Very often Florida queen breeders have complained, and bitterly, of the losses sustained in their mating queens during their wedding flights; but it is seldom that we hear of any beeman sounding his woes over losses of workers from same source. We are convinced that the flight of these mosquito hawks is often very local. We have noticed that in some years they will be very troublesome, a positive pest, in one locality, while in another

yard, perhaps less than 25 miles away, little if any loss will be sustained. The secret would thus seem to be: "Place your eggs not all in one basket," that is, have more than one yard. Then, if the first proves poor, try another, and place most of the mating virgins in that one where the hawks seem least annoying. Personally, we know of no remedy for this evil. Could not the Government experts get to work, and see if some sort of fungus, parasite or natural enemy could not be instituted, or set to work, that would in time do away with this nuisance? (E. G. B.)

The Review Will Continue to be Published

Some timid persons may hesitate about subscribing for the Review, fearing its publication will be discontinued. To such we would say that there has been no talk of discontinuing the publication of the Review, but whether the National or some friendly association should continue its publication. Tell your friends that the Review will continue to be published, also, that it will be published by very close friends of the producer, too, as heretofore.

On another page of this number of the Review we publish a communication from Mr. E. S. Miller, Valparaiso, Ind. The subject treated is a vital one and we call the attention of the delegates to the Denver convention to the suggestion brought out by Mr. Miller. Over in Canada their National Association of beekeepers have a committee whose purpose is to ascertain the crop condition; then, knowing this, they proceed to establish a price that their members are supposed to not undersell. This price is both wholesale and retail. Such a committee on this side OUGHT to have a considerable influence along the line of establishing a uniform price for honey.

If everyone gets pay for labor expended in the sale of honey, there should be three different selling prices for honey: a jobbing, a wholesale and retail price. The jobbing price, where one sells out his entire output to someone in a lump, saving much of the expense of selling, in fact, turning this part of the work and expense over to someone else. A wholesale price of say two cents a pound above the jobbing price, where one sells to

bottlers and pedlars, etc., in one or more case lots. This latter plan is the one with which the writer has sold nearly all the product of ten yards this last season, and is the best where one does not care to sell direct to the consumer. A retail price where one sells direct to the consumer in say 5 lb. and 10 lb. friction top pails should be not less than twice that of the jobbing price.

Friends, what is your idea along this line? The sale of honey is at this time the more important subject confronting the producer and the Review is open wide for anything that will throw light upon this much neglected subject. Let us hear from you who know how to sell honey at a profit.

Cultivating a Home Demand for Honey

We have written before that one who has a good home demand for his honey, either comb or extracted, is fortunate. This time we will discriminate, for there are some who may think they have a good market at home, still, they sell at such ridiculously low prices that they soon decide that there is more profit in sending their product away in large quantities, than retail at home. The fault is not with the system, but in the price asked at retail. How many start out to retail extracted honey at 10c per pound? If it is the better grade of white honey, not too far from a market, this is only a good, stiff wholesale price. Many will argue that they cannot get better prices, because some neighbor sells for less. This is because **they are not good salesmen**. A good salesman **never cuts prices**, but shows up his product in such good shape that it sells at an advance over ordinary goods. It is sometimes good business policy to buy out the competitor who is inclined to cut prices, either retailing his product, or, if not of a grade suitable for your home trade, ship it to some market not so discriminate. If several are to work the same territory, it might not be a bad idea to "get your heads together" and decide upon some uniform price to sell at, direct to the consumer. If you bottle and wholesale to your dealer, you will find that the large bottler has cut the price so close that you will not get very rich, should you sell at his price, so there will be no danger of cutting price in this case.

A Subscriber Writes an Editorial

The great big problem for the American beekeepers to solve is not how to produce more honey, but how to dispose of it at reasonable prices; and yet, the programs of most of our association meetings show about nine tenths of the time given to the production end.

It would seem, also, that we might for a time ease up in our campaign for inducing beginners to enter the field of production. It would be difficult to find any other business extensively engaged in courting competition.—E. S. MILLER.

Metal Hive Covers

So far as we are personally concerned, the last word has been said in hive covers. We refer to the metal covers, with a wooden (or canvas) under cover that is called super cover by some. After ten years of trial of practically every kind of cover that man's ingenuity could devise, from wood to paper, we have hailed with joy unspeakable the advent of the metal cover. We first ordered 100 of these covers from the Root people, as a sort of trial. We shall henceforth use no other. Made of galvanized tin, they stand the heat and the dampness of our southern summers, whether they be painted or not. That means no leaks, and no leaks means dry colonies. The two and one-half inches of telescoping on sides and ends give ample room for se-

curity, even after the super board is placed under them, we have even put both a super board, and also stored the queen—excluding honey—board, both, under the cover, and still found that it would not blow off in heavy winds. We prefer, of course, to have but the one board under; then we can view with complacency either a hard wind or a heavy rain. Another fine feature is that one can set his hot smoker, going full blast, down on a hive cover and not find the "tarnish" of a black burned slot, as he surely will, at times, if he sets the smoker down thus on a wooden cover. We have never been able to make a board cover shed water, always and under all conditions! Who has? This metal cover is light, even lighter than the excelsior cover, at least lighter than the Colorado cover, which is the former with side telescoping rims added. These are good, but not equal to the metal covers. They can also be stacked up much more evenly and easily, and lie flatter, than most of the covers we know of. (E. G. B.)

In the January number of the Review, through an error we reported Mr. L. J. Hawkins, 4 Emery St., Everett, as Secretary for the ensuing year of the Eastern Society of Beekeepers, when it should have been Mr. Benjamin P. Sands, 1051 Old S. Bldg., Boston, Mr. Hawkins only acting as temporary secretary.

Subscribe for the Review.

Where the Convention Will be Held

The very latest from Chairman Foster, just as we go to press. "All delegate sessions will be held at the Auditorium Hotel and the public sessions will be held at the Tramway Auditorium three blocks from the hotel. This auditorium will seat 460 while the Convention hall of the hotel will accommodate about 175 to 200. The Tramway auditorium costs sixty dollars for the convention sessions but this matter is handled by the Denver Convention League so we get the Tramway auditorium complimentary. This auditorium is equipped with motion

picture machine if we care to use it.

Exhibits will occupy an entire store room of the auditorium Hotel building and a custodian will be in charge to demonstrate and look after the exhibits.

A special honey cooking demonstration will be in operation throughout the convention.

The railroads of Colorado will announce the convention dates, etc. in their advertising space carried in the country and city papers of the state."

WESLEY FOSTER, Chairman.

Out-of-Door Wintering of Bees

Read at the Michigan Affiliated Meeting of Beekeepers, Detroit, Mich.
December 10-11, 1914 by Ira D. Bartlett, East Jordan, Mich.

Mr. Chairman and Brother and Sister Apiarists:—

Either your Secretary misconstrued the meaning of my topic or else the printer figured one or both of us were wrong and changed it, as my topic was to be "The Out-of-Door Wintering of Bees," instead of "The Wintering of Bees Upon the Summer Stand."

I have had no experience in wintering bees in the latter way and doubt very much if it would be wise to attempt it on a large scale in this Northern part of the state. I have been very successful in wintering bees out of doors, packed in what I term "winter hives," which are made large enough to hold four colonies, and space left around the outside of about 5 inches to 6 inches for packing after the hives are placed in position, such position giving space for some 6 inches at the backs and 2 inches at the sides.

The winter apartment is first prepared with a 3-inch packing over the floor, said packing coming up even with four strips running at right angles with the long way of the hive, and upon which the summer hives are placed, two colonies facing the East and two to the West. After placing them in proper position to give the spaces above mentioned and placing the entrance

strips, which allow free passage of the bees to the outside at any time, the packing of planer shavings is put around the colonies and over them some 10 inches or 12 inches. The summer bottoms which have a $\frac{5}{8}$ inch space in front running to $\frac{3}{8}$ inch in the back, are left on, and over the frames is first placed a canvas cloth, then a heavier quilt of burlap, (usually a sugar sack doubled, making four thicknesses, is used), and over the burlap several thicknesses of newspapers.

This packing is very warm and the condensation of moisture over the frames is very infrequent, with the result that the bees come out active and bright and the frames and combs are in very nice condition. I contract the entrance down to about four inches, and bank up snow around the hive when it comes. There is no danger of smothering the bees even though the entire winter hive is covered with snow, as there is a great plenty of air in the snow for the use of the bees. Even if a crust forms in spring, don't worry. It won't smother the bees; there is always plenty of air in the snow. If bees are packed warm and dry and have air and good stores, they live a long time. Where the trouble is, is in the

(Continued on page 68)

Candy for Winter Stores

By F. L. POLLOCK, Stouffville, Ontario, Canada

For several years I have been using candy more and more for wintering and I believe there is nothing equal to it, especially for our severe northern winters.

My first trial of it was some years ago, when I found half a dozen colonies that had been overlooked somehow, and that were very weak in the autumn. They averaged three or four frames of bees and about ten pounds of honey. I ought to have united them, but they had queens that I was

anxious to save, and besides I was trying to make all the increase possible. So I put them in the cellar, giving each a six-pound cake of hard candy laid on top of the frames.

It was a very cold winter, and the temperature in the cellar fell to 32. But when I set the bees out they were all alive and nearly as strong as when they went in. They had consumed most of the candy, but scarcely any of the honey, showing that the small cluster had not been able to move

freely from comb to comb. Without the hard candy they probably would have starved, even with honey in the hive.

Since then I have wintered exclusively out-doors, and have been successful in bringing quite weak nuclei through by packing them warmly and giving a cake of candy on top. Such a nucleus is not worth much in spring, of course, except for the queen; but an extra laying queen in April is worth a good deal.

My neighbor and friend, Mr. J. L. Byer, has said that an abundance of good stores is the prime desideratum for successful wintering, and I have come to believe it firmly. Bees will stand a great deal of cold, but in a prolonged zero period they run the risk of being stranded on empty combs, especially if the colony is not very strong. But the cake of candy on the top of the frames is always within reach of the cluster, and affords a passage way over the top of the combs. Towards the end of the winter the cluster will be found hanging on the under side of the candy.

What bees will endure in the way of cold has been well shown in the past winter. The temperature fell as low as 36 below zero. For over a week it hardly rose above zero, falling every night to 10 or 20 below, coupled with piercing winds, but on a mild day at the end of February I found all my colonies alive, somewhat to my surprise. I discovered that I had somehow forgotten to put cushions or any top packing on four colonies. They had only a piece of burlap over the frames and a shallow telescope cover on that, yet the colonies seemed in as good condition as any of the rest. They had no candy, but heavy sealed combs of honey. A neighbor of mine did not pack his bees at all. He left the extracting super on full of sealed honey, put a piece of brown paper over the top, and let it go at that. At last reports the bees seemed to be doing well.

I have got the best wintering results from the divisible brood-chamber hive, in two stories. I have the upper story entirely full of sealed honey in autumn, making about 30 pounds, and there is a passage way through the center of the hive. I seldom lose a colony prepared in this way. I also find they usually build up faster in spring than the Langstroth, though Mr. Townsend reports differently. I use Carniolans, however, or a Carniolan cross for these hives. When the queen has filled the top story with brood, mostly sealed, I exchange the position of the sections. By the time the second half is well filled, a third can generally be inserted between them. The force of bees that a three-story Carniolan colony will send out is sometimes amazing. You would not think that they would swarm much from a hive of that size, but I find that they do.

To get back to the hard candy--- I make it according to the directions in the "A B C of Bee Culture." I have made it soft and porous and close-grained and hard, but when it is soft it excites the bees and they take it up too fast. I do not care how hard it gets. When it is almost as hard as a brick the bees seem to chew into it just as well. I usually make it in cakes about an inch thick, weighing from four to six pounds, according to the needs of the colony. I have never wintered a colony on candy alone, but it has been done successfully in Germany. A cake weighing eight pounds should do it, but it would be necessary to give syrup or honey early in spring, as the bees will rear brood to only a very small extent on candy.

It appears to me that American foul brood might be very well treated in the late fall by shaking the bees upon clean, empty combs with a large cake of candy on top. Any infected honey would be stored in the combs and consumed long before brood-rearing began again. If anyone has ever tried this I should like to hear how it works.

Management of 3000 Colonies of Bees in 50 Yards

By J. J. WILDER, Cordele, Ga.

During the third year's work in the new field Mr. R. W. Herlong, who was an extensive beekeeper located

at Fort White, Fla., about sixteen miles from my second branch of business in the new field, died, just as

he was going into a great honey harvest and the care of his bees fell into my hands, at the request of his widow. Just at that time we were greatly pushed with our work and it seemed we had all we could stand, as we were in a great honey flow everywhere, and the bees claiming our attention as fast as we could get around. I brought the situation before my men and asked them if they could do a little bit more and if so we would take the bees. They told me they could and would and for me to take them. I gave every man one or two more apiaries, equalizing the work as it were, and I took my best helper and together we made a hurried trip around to the Herlong bees and noted conditions, etc.

After examining them as best we could in a hurry, I left and went back home, where I was most needed, leaving the helper in charge of the bees of Mrs. Herlong, with full instructions how to proceed during my absence. On reaching home, I sent two assistants to help in the work. The first helper had had considerable experience already, and could direct the work of his two assistants to good advantage.

To be on the safe side I made a hurried trip over their work again and found everything done as I had directed, and the work progressing nicely, when I left, not to return any more that season, and a great harvest was the result. Well, this was "bee-keeping some" and after the fashion I had so long desired.

We now come to the fourth year of work. Mrs. Herlong notified me about the first of the year that her bees were for sale and I was in position to buy them and I really wanted them, as they were near mine. I went to see her and soon closed the trade for them, which consisted of seven apiaries. This deal gave us our Fort White branch, making three branches in the new field. I turned these bees over to the man who had worked them for me the previous season to work them on shares and thus he has worked them ever since.

These three branches are about 200 miles from the home branch and operated solely for comb honey.

Now the business was in fine shape for the approaching season: well arranged and plenty of experienced help right where it was needed and could

be used to best advantage. All the bees in all the branches were to be worked on shares, dividing equally between us the honey and the supply bills, except in the case of making increase, when I furnished all supplies and paid 50 cents per colony for all increase, but not much was made.

During the past several seasons I had had a little bitter experience with some to whom I had intrusted the care of some of my bees at the new branches.

They slacked work somewhat at the critical time and never pushed it as they should or as they wrote me they were doing. This resulted in losses, and one or two fell "flat down on me," but I have always let such hands go as soon as discovered and never give them employment again in any way. I saw that I needed a general overseer for all my bee business whose duty it should be to go from yard to yard and from one branch to another and keep the business right up to what it should be and keep me posted as to progress all around. In our ranks we had a young apiarist who made things happen and happen in the right way and our choice fell on him. He knew where every yard was, its name and in whose care it was. As soon as the spring was on and the weather permitted the handling of bees, he went at the work of making the rounds to all yards as quickly as possible, starting at home yard first, afoot, with smoker, veil, hive tool and apiary book, a memorandum or small tablet. The route of his rounds was planned: he was to travel by foot, rail and with apiarist when convenient. He was to move by the quickest and most convenient routes and stop wherever night overtook him. His duty was to examine every hive in every yard and whatever was most needed he was to do it, and what he did not do was fully outlined in the tablet he carried and the sheet containing it torn off and placed where apiarist in charge would find it and carry out the work. This was done at every yard and general conditions noted and sent to me. Thus I was kept well posted throughout the season on conditions and progress, etc. I gave instructions where and when needed. The work moved along well under the new system. I saw the foreman but twice during the season after he

left the first time. Once he appeared at headquarters, spending the early part of one night with me, and leaving on an early morning train. He came again several times and looked over home yard during my absence, but never halted. I saw him at another time as he was leaving one of the yards in Florida. I came up just in time to shake hands with him and have a few words with him. As he was leaving I said to him. "How is it, my boy?" and he replied, "We are making a great crop of honey," and went on his way. When the harvest was over and the pack finished there were over 200,000 pounds surplus all told.

Thus our fourth year's work was crowned with great success.

Valparaiso, Ind. Jan. 20, 1915

BEE-KEEPERS' REVIEW.

Northstar, Mich.

The big problem for the beekeepers to solve is not how to produce more honey but how to sell what we have. We want the National to assist in solving this problem. If it is decided at the Denver meeting that the Association is to be a mere social organization, real beemen are not going to take much interest in it. What we need is a business organization that will accomplish results when it comes to disposing of the crop at a reasonable price, and which will also assist in purchasing supplies.

By all means keep the Review; it is a big asset.—E. S. Miller.

(Here is our hand Brother Miller: We cannot see for the life of us,

why the National cannot be an all round beemans' association. The new proposed constitution will, if adopted, be broad enough to take care of every individual want, in which case why will some insist upon shutting out a feature not to their individual liking, when THEY KNOW this same proposed proposition will help many of our members. Brother delegate to the Denver convention you will be called upon to decide several perplexing questions. We entreat of you to be broad in your deliberations, always remember the wants of others, the majority should be considered, as should the minority. Those who would make the association a scientific one should be considered, those who would make the association a source of popularizing honey should be considered, those who would through the association buy their supplies at a less price, or sell the product of the hive to better advantage should be considered, those who want the National to continue the publication of the Review should be considered. In fact, our constitution should be so broad that it would take in the needs of every member, no matter what his taste. Brother Miller says "by all means keep the Review; it is a big asset." The point is well taken, Brother Miller. Although the Review under the present management may not be as well up in letters, as it ought, nevertheless, it seems to be filling "a long felt want" among the producing classes. We would make a great mistake to let the Review go at the present time. Ed.)

National Comb Honey Grading Rules

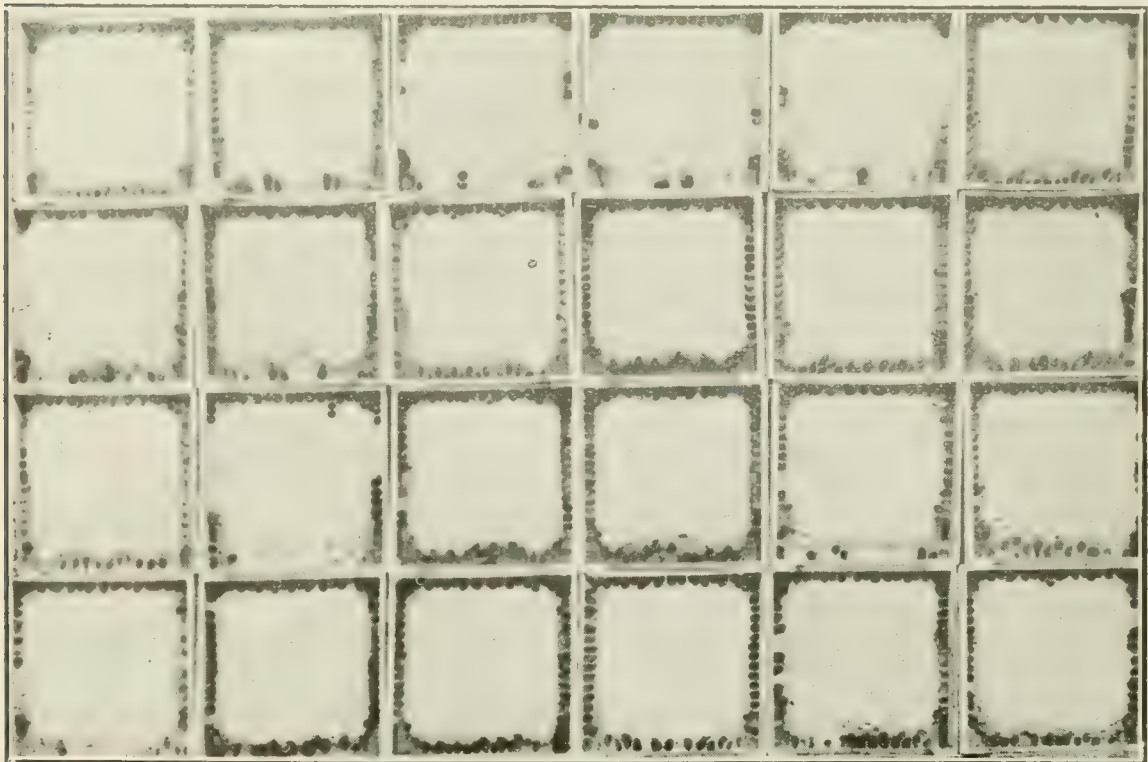
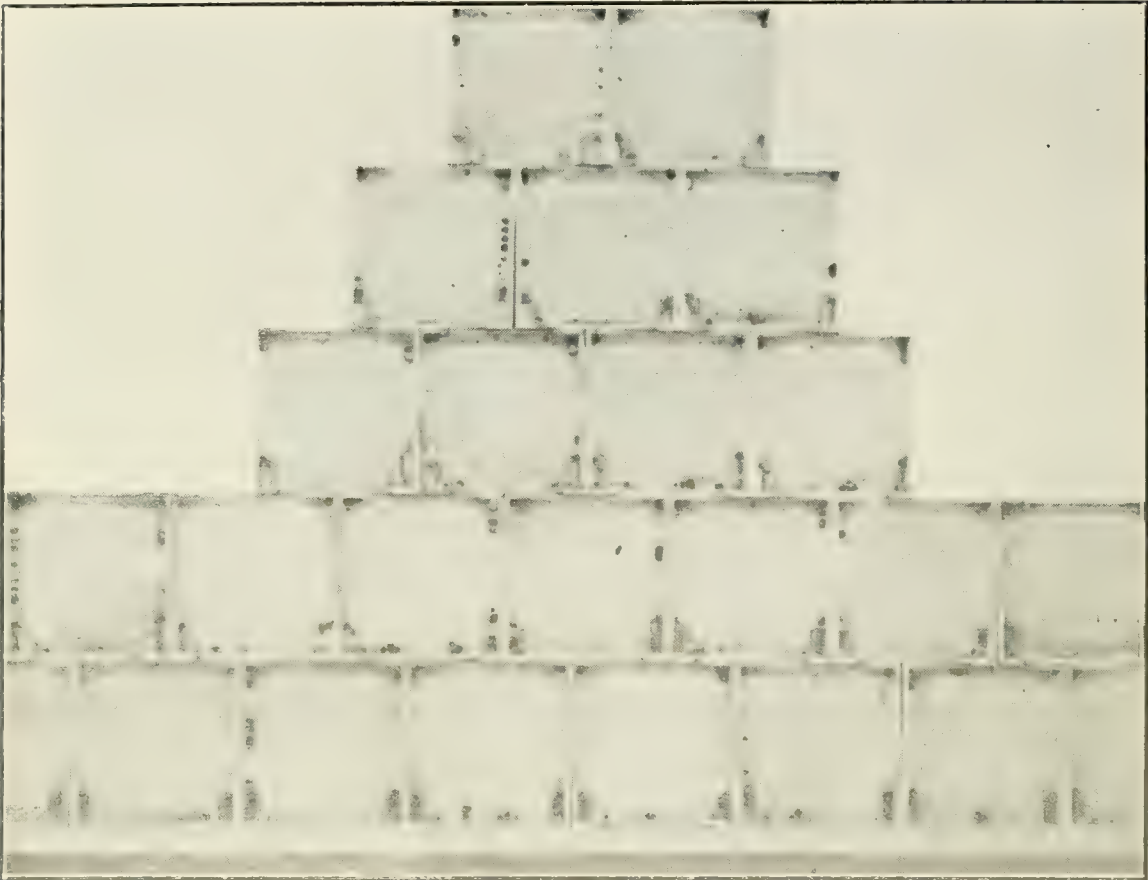
By WESLEY FOSTER, Boulder, Colorado

The National Bee-Keepers' Association adopted grading rules for comb honey at the Cincinnati convention in 1913.

These rules have been published in the bee journals, but it is doubtful if they have been used to any great extent throughout the country. The writer is aware that upon a casual reading of the rules, the average beekeeper will gather that these are a

numberless set of different grades. This is very nearly true, but that is not saying that every beekeeper who grades by these rules will have numberless grades. As an actual fact, he will have not more than three or possibly four.

If the beekeeper will grade his honey carefully according to the rules, each case will be uniform in the make-up of that case, so far as weight,



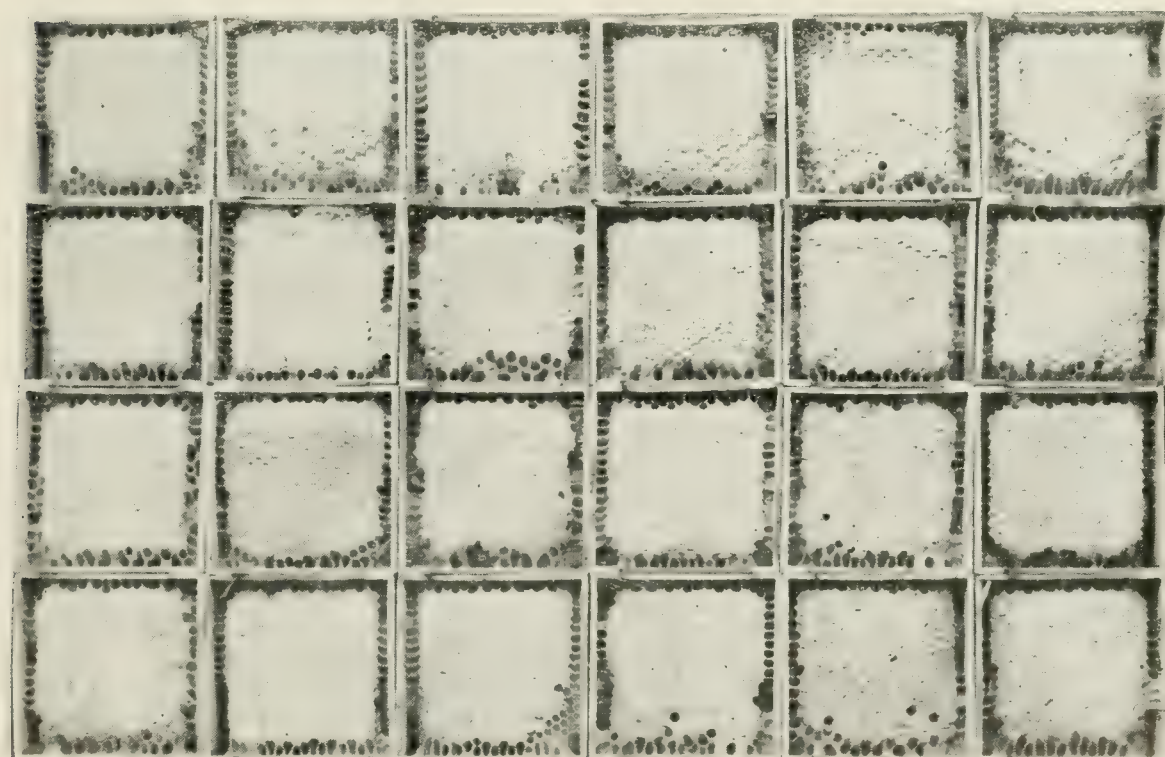
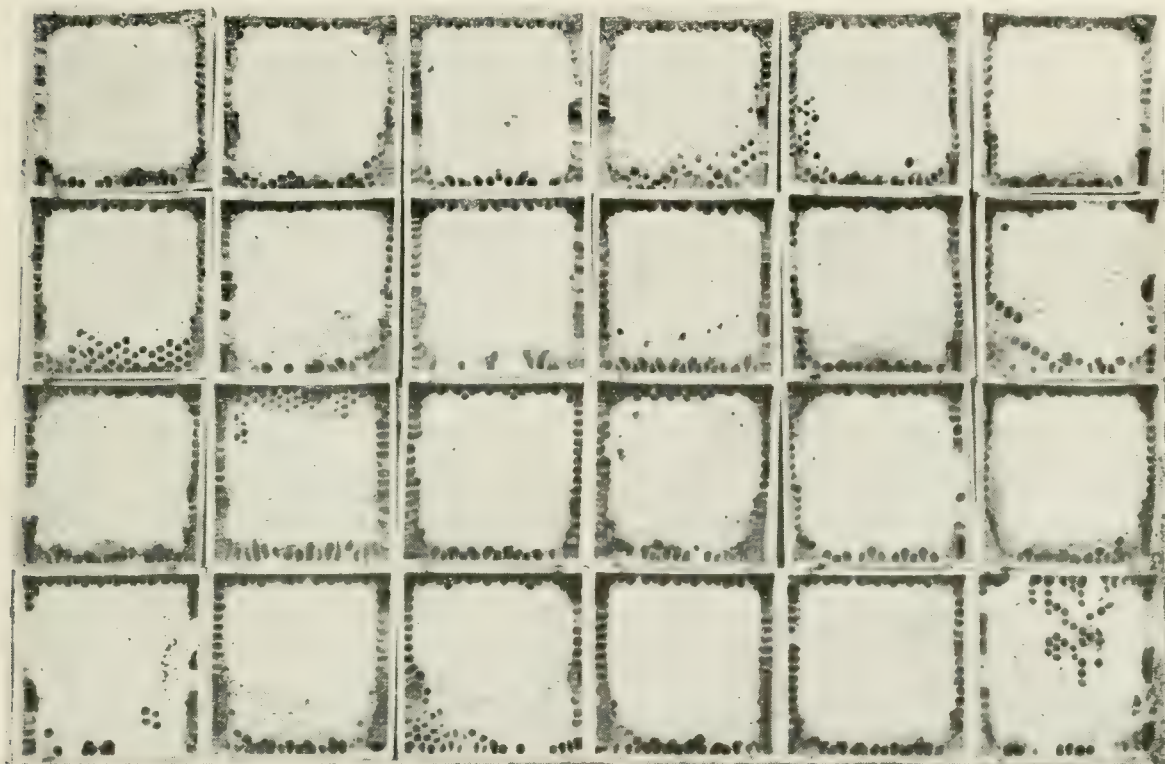
National Grading Rules in Picture, as Graded by Wesley Foster, Boulder, Colorado.

Extra Fancy (At top), Fancy (Lower Halftone) Number One, (At top of next page), Number two, (Lower half next page).

color of honey and finish is concerned. He will have, if he is an average beekeeper, no extra fancy comb honey at all. This grade is illustrated in Figure No. 1, which is just as the name implies. There is enough of this honey produced so that

there is justification for the grade.

In Figure No. 2 is shown a case of fancy comb honey. No attempt, of course, is made to show the color of the honey, or cappings, or the weight. These items would be impossible to show by pictures and it is



not necessary.

Figure 3 shows one side of a case of number one comb honey. This honey is slightly off in finish, but is number one in all that the name implies.

Figure 4 shows one surface of a case of number 2 comb honey. This honey is marketable and includes honey that, under Colorado rules, would be called cull honey. Cull honey is not a commercial shipping honey, while this honey that has been classed as cull is worthy of the market. In fact, such honey as this number 2 is quickly picked up on the big markets. Its ready sale is testimony enough that it is not cull stock and should not be so classed.

The greater bulk of any one beekeeper's crop will be made up of fancy, Number One and Number Two. According to his expertness, will he be able to reduce the number of cases of Number 2 and increase the numbers of first grade and fancy.

With the enactment of the Federal net weight law, it will be necessary to put sections of uniform weight together in cases, as the rules specify this and the law makes it advisable. In this way Fancy White, Fancy Light Amber, Fancy Amber, etc., would have each section stamped with the weight, while on the end of the case would be stamped the grade and color and actual net weight, if desired, or the heavy, medium, or light could be used.

The outstanding advantages of the rules are that amber honey does not have to be sold at a Number 2 price if it is fancy in finish and quality.

It is possible to secure the maximum value for each section of honey if it is very near in finish, color and weight to every other section in the case.

As beekeepers gain more knowledge of the demands of the market and become more careful in grading and packing, the rules will be more fully appreciated. It is not argued that they are perfect. The writer thinks there are some minor changes desirable, but the principle upon which the rules are founded is correct.

These rules do not give opportunity to the buyer of a car of honey to "grade up" the lot by re-packing. For this reason, it will be hard for some beekeepers to make sales if grading by these rules. One's market, of course, must be studied and what is best for each one followed. But the trend will be toward this careful differentiation of different finishes, weights and color of comb honey.

There is a very important question arises from the stamping of the minimum net weight on sections of comb honey. Take the number two honey as an example. A section of number two honey may weigh fifteen ounces net and have sixty unsealed cells. If it is put in with the number two grade it will doubtless be stamped net weight not less than nine ounces. Why not stamp it net weight not less than one ounce and so make the net weight law of no effect? That is the partial result, anyway, by stamping a weight several ounces below the actual net weight. The National rules cover this matter more satisfactorily than do the Colorado rules, for the National rules specify that each section shall represent the contents of the case in finish, color and weight. If this ruling is followed number two honey weighing fourteen and fifteen ounces should not be packed in the same case with ten and eleven ounce honey. And the approximate minimum net weight should be given.

Concerning Retail Prices

By EUGENE S. MILLER, Valparaiso, Ind.

Inasmuch as producers are retailing honey in five and ten pound pails and gallon cans at prices ranging from ten cents to twenty-five cents per pound, perhaps it might be feasible to arrange for a conference of beemen to agree upon a rational price basis. Possibly a committee could be appointed at the next meeting of the National Association to

work out and to recommend a suitable retail price based upon the wholesale price. Of course, the cost of selling is greater in some localities than in others and some modes of distribution are more expensive than others, but at present there seems to be too much discrepancy in prices. Much of the difficulty comes from the small producers and some of the larg-

er ones who persist in retailing honey at wholesale prices and who fail to consider that it costs time or money to put honey up in small packages and to sell it to individual consumers.

In working out the cost of distribution the following should be considered:

- Cost of packages, including freight.
- Cost of labels and labeling.
- Cost of liquifying and putting up.
- Postage, express or freight charges.
- Boxing and packing.
- Advertising or
- Canvassing and delivering.

If one performs his own labor it is, nevertheless, worth money and should be counted in the cost. Of course, if honey is drawn directly from the extractor into small cans or pails and sold while granulated, the cost can be considerably reduced, but probably nine people out of ten prefer honey in liquid form and the demand for this will be greater. Some of the above items of expense can be omitted when selling in one's home town or city.

Experience in putting up and disposing of many tons of honey in small packages would indicate that about three cents a pound should be allowed for labels, pails, freight, boxing, and labor. To this must be added the wholesale price, the postage, express or freight charges, advertising, or canvassing and delivery, amounting to not less than 15 or 20 cents per pound in all when sold in single 5 lb. and 10 lb. packages or 20 to 25 cents in one pound jars.

"Valparaiso, Ind., Nov. 7, 1914.

I have read with interest the "Lazy Man's Way" of transferring bees, given by E. G. B. in the November number of the Review. Permit me to say that while this plan may work occasionally, it will prove a failure in most cases. Ordinarily, the bees will pass up through the excluder to the brood, leaving the queen below to perish, unless some brood is also placed below. Whether the queen survives or not, queen cells will be started above if sufficient nectar is coming in, and, if weather conditions are favorable, swarming will follow when they hatch.

In using the Demaree plan of manipulating colonies, I find that in some seasons swarming accompanies the capping of the cells, and it nearly

always follows the hatching of the cells above the excluder. The virgin queens often manage to squeeze through the excluder and get away with most of the bees, leaving the old clipped queen behind. I am aware that there are many beemen who claim that the removal of cells above the screen is not necessary and that the young queens will be killed by the bees, or, at least, they will not be able to induce many bees to swarm out, but such does not coincide with my observation during years of experience with hundreds of colonies. The fellow who works his bees on the "Let Alone" plan really doesn't know how many bees he loses nor how much honey.

E. S. MILLER."

In an interesting letter just cited from Mr. Eugene S. Miller, of Valparaiso, Ind., relative to the "Lazy Man's Way" of transferring bees, given in the November issue of the Review, Mr. Miller says the method will not work every time, that the bees will, in fact, desert the queen, in the majority of cases, and go to their brood; and adds, that queen cells will be started above, anyhow, and swarming result before the second driving of the bees from the old box. Well, "many men of many minds," and so on, but we can only repeat, that nothing succeeds like success, and as we have not had a failure, with the method as described, we naturally trust a bridge that carries us safely over. Mind, we do not advocate this as the best for all time and all places. Usually we do the act in the conventional way, but for a sort of short-cut, when time is scarce, this is worth trying. We shall be glad to hear reports from any others. We also thank Mr. Miller for so frankly stating his side of the case, and hope that he will give it further trial again and report, if he will, in the Review. We might add that our trials of the method were made in only a moderate flow, rather less, than above, the average, no swarming on hand in the apparently, above the excluder. At least, no swarms issued, nor did any virgins make their appearance. We worked over the hives, whenever we tried it, only the two times, the first, to transfer, as described, the second, to finish the driving out of all bees that had hatched subsequently. That last time we also disposed of the old hive and contents. (E. G. B.)

The Secretary's Corner

GEO. W. WILLIAMS, Redkey, Ind.

Hurrah for Dr. Bonney's stickers. I have just got some of them. Have you seen them? Get some and put one on every letter you send out. I have just written Dadants, congratulating them on arranging them for sale. They only cost a trifle, 35c per thousand. I would like to see a million of them put on letters the coming year. This is one of the little things that show which way the wind is blowing. It is just what I like to see. It shows that we are all "getting together and boosting." When we all get to using our brains and common sense in pushing honey to the front in every way possible, beekeeping will advance with rapid strides. When our people use their ingenuity in devising ways and means to SELL HONEY to the extent that they have in the past in making improved drone catchers and double acting, divisible Brood Chambers, we will get results, and BIG ones at that. Who will be the next

lucky man to give us something good. Start it off, and we will help you "boost" it in the "Corner" without costing you a cent, if it will "boost" honey.

How do you like the Review lately? Isn't it a "Hummer"? Some are criticising it and wanting to drop it, because it is "crude and uncouth." I take it that the Secretary is to blame, as his picture was printed in it. Do you know how much the Review is costing you? Do you know the sacrifice the managing editor is making to give you the Review? If you are criticising, you had better find out. Do you know how much salary the associate editors and correspondents get for giving you the best that they have? They do not get a red cent. You get the Review and membership in the National Association for the same price you would have to pay for fees alone if the Review were dropped. In that case, there would be



Luncheon of the Colorado Honey Producers' Ass'n at the Auditorium Hotel, Dec. 29th., 1914.

The National Convention will meet here the 16-17-18th on this month. The reader is especially invited to attend this meeting.

the reports to print, and a thousand little expenses that are not necessary with an official organ, and at the end of the year the Association would be about even anyhow, and the thousands of members would not have the paper. You need not be alarmed, the Review will not be dropped. If the present Association is not built along lines adapted to carry on the Review and other material interests of the beekeepers, it must reorganize along lines that will allow it to do so, or turn the material interests over to an agent that is fitted to do it. The National cannot go on and even exist much longer unless it adopts a settled policy **AND STICKS TO IT.**

I think I hear someone whispering hiss-s-s-h. Now, seriously, if a person is ill, is it not better to try by all means to make him well, even if a surgical operation is necessary? It seems to me that there is room in the National Association for all to work in harmony. For instance, the isolated producer wishes to save a little cost on his cans. He is just as convenient to Mr. Townsend as he is to

any other source of supply. He can save money by sending his order to Mr. Townsend. Mr. T. can make a few cents for the Association, and never touch the goods, nor in any way impose the least pecuniary responsibility on the Association. I **OBJECT**, comes from someone—it will lower the dignity of the Association, and antagonize somebody. **Objection sustained.** Again, the producers wish to take up the question of publicity. I **OBJECT**, says someone else, it will not succeed. All other plans have failed, and of course this one will. **Objection sustained.** Someone proposes a plan to raise money to do something with. I **OBJECT**, it would not be according to Hoyle. **Objection sustained.** And so on.

It is urged that it is not good policy to publicly discuss the private affairs of the Association with the members as it will bring discord. May I ask whose affairs these are? Are they not the affairs of the members? Is it right and proper to arrange the larger policies of the beekeepers in secret caucus and then expect them



Auditorium Hotel, Denver, Colorado, where the National Beekeepers' Convention will be held, the 16-17-18th of this month.

to accept them willy-nilly?

I mean by this, any policy that will affect any considerable portion of them. Of course, the little things must be settled by the Directors.

I got off my subject a little, but I am going to let it go, and start over again. I started in to say that it seemed to me that the National is big enough to accommodate all who are interested in honey production in any way, and give ample room without crowding. Take, for instance, the launching of a nation-wide campaign for advertising. Let's see if we cannot find room for everybody to get busy in that, and not get crowded. Did you ever undertake to launch a nation-wide campaign without much means? I have. I started into it once and got as far as to cover Indiana, and—reduced my plans somewhat. But I did not have enthusiastic supporters in almost every hamlet in the country to look after the local papers; I did not have a thousand intelligent young men and women willing and able to make demonstrations in stores and at fairs; I did not have three or four splendid journals willing and able to co-operate in my campaign; I did not have 10,000 men and women ready and willing to assist in publishing my good news to a willing public. I did not have an able corps of lecturers and demonstrators to entertain field and local meetings; I did not have a thousand able writers to flood the papers with news and stories pertaining to my business. I did not have a public ready and willing to accept my product without question, but I had to educate it. I had none of these things, and I made a wonderfully successful campaign with much less money to begin with than the Association can command. I did it by planning ahead and everlastingly keeping at it.

With all this army of more than 100,000 beekeepers in the United States organized and working together, the consumption of honey can be doubled and even trebled in three years. I know, for I have seen it done in different localities, and under different conditions, and with both comb honey and extracted. Room enough for all to assist, isn't there?

There are certain fundamental rules of business that must be rigidly observed to insure success in a publicity campaign for honey. Frank Ruchfuss and many astute business

men have all given these as basic.

First, absolutely uniform grading for both comb and extracted honey, sold under a guaranteed and distinguishing trademark.

Second, a full and exact knowledge of the source of supply, the channels of distribution and the exact requirements of each market.

Third, a thorough organization and harmonious co-operation in all branches of the organized body.

A settled policy, approved by all the units, with sufficient funds to carry it out.

Last, but not least, a recognized director, broad enough to get the needed perspective, quick to grasp the necessary details, and persistent enough to hammer away until the cows come home and pugnacious enough to fight if necessary. I hinted at the possibilities of such a campaign as this early in the spring to the Directors, but it was not taken up at that time. Recently it has been mentioned and incidentally I suggested that it could not be undertaken at the present salary of the Secretary. It was suggested that the Secretary in all his little squibs and correspondence was working with the idea of organizing some plant like this for the purpose of getting his salary raised. I will admit one part of the allegation with pleasure. I have written every word of the little items with the single idea of "stirring up" the different members to the possibilities before them. As to raising the salary, your Secretary or anyone else who has had any experience with advertising would require several times the present salary (of nothing at all) to undertake such a big job. Much good can be done, however, with very little means. But the Association should be reorganized to suit the requirements of the business to be transacted, if it attempts the task.

This is a big country. It is a long way up and down, and longer across. It is a tremendously big and expensive undertaking in the ordinary way to make a shore-to-shore campaign of publicity. I do not underestimate it. I have been against it, and know. In an ordinary way, we would not get to first base with the means we can command, but with our resources we can make a home run with time to spare, with proper organization. The difficulty with all the doubting Thomases is that they overlook the tre-

mendous possibilities of advertising in the enthusiasm of the beekeepers themselves. This has heretofore taken the form of inventing traps and conveniences around bee-hives, etc., and it is now turning into the channel of publicity, and what wonders may not happen when the 100,000 beekeepers get after that phase of the matter in earnest. We have no time to pick flaws with the editor for doing two men's work for one man's pay, or as has happened, for no pay at all, and no time to quarrel about the ethics of the little things, but we must go after the things worth while, and go hard. We must make up our minds to one thing, too, and that is, whatever way we go, we will need more funds than we have had. The Association is past the age of sentiment, and is out for business. It can no longer pay its bills in sentiment, but must pay in coin.

And now for Denver. How would it suit you to gather at Chicago and

all the delegates from east of there take a special reserved tourist sleeper the rest of the way? Arrangements have been partially made that way, and those south and west can join the party at any point west and all have a good time. The car will start at 10:00 P. M., Sunday, and arrive at Denver Tuesday morning at 7:00 o'clock, in ample time for the morning session. All the delegates and visitors who wish to take this car should send me their names, especially those west of Chicago, so ample accommodations will be provided. The cost of the tourist sleeper will be about \$3.00, in addition to the regular fare. As the whole car will be reserved, we can bring our own luncheon, have our own coffee, and be at home, and go visiting with each other all at the same time. The time set is the 16th, 17th, and 18th of February, and the convention will meet in the Auditorium Hotel. The rates will be \$1.50 per day, where two occupy the same room.

Special Car Secured for the Denver Meeting, February 16-17-18, 1915

A special reserved tourist car or more if necessary has been secured to accommodate the delegates and visitors to the National Association Meeting at Denver. The routing is over the Burlington (The C. B. & Q. R. R.) starting from the Union Station, Chicago at 11:00 p. m., Sunday, the 14th. and arriving at Denver at 7:30 Tuesday morning in ample time for the meeting. The fare between Chicago and Denver is \$22.75 each way, lower berths are \$3.00 and they will accommodate two persons at the same price. The upper berths are \$2.40.

The sleeper will be ready about 10:00 o'clock. I would advise you to buy your tickets at your home town clear through, as you will save a little by this way in most cases. If you are going to the coast, you can have your ticket routed this way, and a one way ticket to the coast will allow stop-over in Denver for the three days, if your ticket bears the full tariff limit. Be careful and arrange this provi-

sion, or you may not get the full time.

In reserving berths, better write to A. J. PUHL, Gen. Pass. Dept., Burlington Route, Chicago, mentioning that the reservation desired is in the Beekeepers' special car. This is essential, and will prevent any delay or inconvenience. If you do not do this, you are liable to find yourself in some other car or even another section.

This arrangement gives all who desire it an opportunity to carry their own lunch, make their own coffee, visit with all the delegates, and get acquainted with those we have never met. It is a splendid opportunity for a good time all around.

Those who are west of Chicago can join the party at any of the places designated in the Burlington's notice in the Review. Better make your reservations so that you will be accommodated.

It is very certain that we will have a splendid attendance at this

meeting, and the Colorado Honey Producers' Association, although not affiliated, are going to do the honors by spreading a banquet for the delegates and members. The admission will be by ticket, free to the guests, and to visitors a charge will be made. The Denver Beekeepers are setting out to make this an occasion long to be remembered. Those who miss it will only regret it once, and that will be all their lives.

Everybody should wear a "bee button" so they will be easily recognized at the Burlington Station, Chicago. If you have none, let me know and one will be mailed you.

GEO. W. WILLIAMS,
Sec. N. B. K. A.

Kind Words

"Hansford, Fla, Dec. 9, 1914.

"Have received the December copy of the Bee-Keepers' Review, also half a dozen back numbers, and am more than pleased; for what I am looking for is the experiences of beemen in the extreme south, near my own surroundings, as having nearly the same conditions under which I am operating.—E. M. Rennolds."

Again, under date of December 17, Mr. Rennolds adds:

"I owe you a debt of gratitude for introducing me to the Review. I had fully realized that I had failed heretofore to get what I wanted from correspondents elsewhere, who operated in fields so radically different from mine.—E. M. Rennolds."

We copy in part from a letter under date of January 4th, as follows:

"The Review is appreciated by many beekeepers whom I know personally, and through correspondence."

J. J. WILDER.

The Bee-Keepers' Review:

I enjoy reading the Review very much, and wish to say that the South is becoming awakened to the possibilities of bee culture. The South is going to be the greatest honey producing center of the United States. Our great resource is our climate. No winter losses and the consequent expense of winter cases or other protection during winter. The bees are left upon their one stand the year 'round, with no attention, excepting to raise the hive up from the bottom board for summer ventilation and

lower it in fall to keep enemies and robber bees out. Wishing you and all a prosperous new year, and that your contributors will give us facts, not theory, in the future, yours for progress,

JOHN W. CASH, Bogart, Ga.

Lemores, Col., Dec. 12, 1914
Editor Review:

You will see that I have returned the expiration blank (without the dollar). Sorry it is so, but to tell you the truth about the matter, the beekeepers here in this valley are up against it. There has been no offer for honey here (I mean extracted—there is no comb honey made here) that was worth considering. I think Gugenhiem's man from San Francisco was up here and offered something like 3¼c per lb., but no one sold any. I expect that there are 15 or 20 car loads of honey here in King's and Tulare Counties. I think the market will open up after a while. We have just had a good rain here and the storm has put a good coating of snow on the mountain so the prospect looks good for a crop in 1915. When the weather is clear we see the snow on the mountains plainly. Distance lends enchantment to the view to me, but it certainly does look good to us valleyites. I am well pleased with the Review and certainly don't want it stopped. I have gotten ideas from a single number that were worth more than the subscription price and I want to know what is going on and keep in touch with the bee people. I take Gleanings also. About the cover, I can concur in what Adrian Getaz says in the December number, page 470, also the yellow cover usually contains some fine printed matter and it is harder to see to read it than it is on the white cover.

I like the series of articles by J. J. Wilder and J. A. Pearce. I think they are practical and up to date. I was especially pleased with the article by Wesley Foster on "Getting an Education at Home," and I will have to say a good word for the Secretary's Corner. His article in the December issue reads about right to me. I am going to try and get some subscribers for the Review and if times open up after a while and money gets a little more plenty I want to put in my mite toward the Review Debt.

IRVING OLES.

The National Bee-Keepers' Association

And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
.....Amherst, Mass.
FRANK C. PELLETT, Vice Pres....
.....Atlantic, Iowa
GEORGE W. WILLIAMS, Sec.-Treasurer
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J. M. BUCHANAN.....Franklin, Tenn.
WESLEY FOSTER.....Boulder, Colo.
GEORGE W. WILLIAMS..Redkey, Ind.
E. G. CARR.....New Egypt, N. J.

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
.....G. M. Frizzell, Temple, Ariz.
ADIRONDACK—H. E. Gray.....
.....Fort Edward, N. Y.
COLORADO—Wesley Foster.....
.....Boulder, Colo.
CHICAGO NORTHWESTERN—E. H.
Bruner, 3836 N. 44th. Ave.,
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Dr. Burton N. Gates, Amherst, Mass.
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.....Twin Falls, Ida.
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F. C. Bowman.....Idaho Falls.
IDAHO—OREGON HONEY PRODUC-
ERS' ASS'N INC.—P. S. Farrell,
.....New Plymouth, Idaho.
ILLINOIS—Jas. A. Stone.....
.....Rt. 4, Springfield, Ill.
INDIANA—Geo. W. Williams.....
.....Redkey, Ind.
IOWA—S. W. Snyder, Center Point, Ia.
KANSAS—O. A. Keen, Topeka, Kansas.
MASS. SOCIETY OF BEEKEEPERS
(Eastern) Benjamin P. Sands, 1051
Old S. Bldg., Boston.
MICHIGAN—F. E. Millen, East Lansing.
MINNESOTA—F. W. Ray, Minneapolis,
Minn.

MISSOURI APICULTURAL SOCIETY
INC.—Austin D. Wolfe.....Parksville.
NEW JERSEY—E. G. Carr.....
.....New Egypt, N. J.
N. CALIFORNIA—Alwin P. Heim...
.....16, Fair Oaks, Calif.
N. MICHIGAN—Ira D. Bartlett....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola, Ohio.
OREGON—Floyd E. Smith, Dallas, Ore.
THE NEW MEXICO BRANCH—
Henry C. Barron, Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger...
.....Liverpool, Pa.
PUERTO RICO—J. W. VanLeenhoff
Ponce, Puerto Rico, 11 Marina, Ct.
SOUTH IDAHO AND EAST OREGON—
R. D. Bradshaw.....Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—H. E. Graham, Gause, Texas.
VERMONT—P. E. Crane.....
.....Middlebury, Vt.
VINTON BEE-KEEPERS' ASS'N—...
.....E. J. Winder, Vernal, Utah.
WASHINGTON—S. King Clover, R. No.
1, Mabton, Wash.
WISCONSIN—Gus Dittmer....
.....Angusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

Completed Program of the National Bee-Keepers' Association Annual Convention

and

Official Meeting of Delegates from Affiliated Societies

To be held at the Auditorium Hotel, Denver, Colo. Tuesday, Wednesday, and Thursday, February 16, 17 and 18, 1915. To be Held Jointly with the Meeting of the Colorado Beekeepers' Ass'n.

The following papers have been contributed to the program of the National Convention:

A. C. Allen, Wisconsin, "Best Methods of Making Increase."

John Bull, Indiana, "Marketing Honey."

Prof. A. F. Conradi, S. Carolina, "Status of Beekeeping in South Carolina."

*J. J. Corbut, Colorado, "What the

Montrose County Bee-Keepers' Association has Done."

J. E. Crane, Vermont, "Changed Conditions."

*C. P. Dadant, Illinois, "Europe's Greatest Beekeepers: Thos. W. Cowan and Edouard Bertrand."

*Wesley Foster, Colorado, "Beekeeping Costs."

*Robt. E. Foster, Colorado, "What the County Association Can Do In

Co-operative Buying."

J. G. Gustin, Missouri, "Bees in the Law."

Geo. B. Howe, New York, "Breeding Bees."

Elmer Hutchinson, Michigan, "Selling Extracted Honey."

John H. Lovell, Maine, "The Pollination of Fruit Bloom."

J. B. Merwin, New York, "Opportunities and the Farmer Beekeeper."

*Prof. Frederick Millen, Michigan, "Agricultural College and Beekeeping."

Millar, D. W., Cuba, "Cuban Conditions."

*Frank C. Pellett, Iowa, "Inspection in Iowa."

*Prof. Morley Pettit, Canada, "The Production of Extracted Honey," "Apiary Inspection and the Disease Situation in Ontario."

*Dr. E. F. Phillips, Washington, D. C., "Development of the Honey Market."

*G. H. Rea, Ohio, "Pennsylvania Beekeeping."

*E. R. Root, Ohio, "Migratory Beekeeping."

H. H. Root, Ohio, "Straining and Clarifying Honey."

Prof. F. W. L. Sladen, Canada, "Autumn Mating to Control Interitance."

Jay Smith, Indiana, "A Plea for Better Bees."

J. W. Stine, Iowa, "Co-operation among Beekeepers."

*J. H. Stoneman, Idaho, "Co-operation vs. Competition Between State Associations."

*E. D. Townsend, Michigan, "A Competency from the Hive."

*Geo. W. Williams, Indiana, "Honey Publicity."

A. W. Yates, Connecticut, "The Educational Value of Bee-Keepers Associations."

G. W. York, Idaho, "Advertising Value of Apiarian Exhibits at Fairs."

*Prof. E. G. Baldwin, Florida, "A Glimpse at Florida: Her Beekeeping and Her Bee-Flora."

The following have promised papers the nature of which is not known:

*Prof. C. E. Bartholomew, Iowa;

*E. J. Baxter, Illinois; *J. M. Buchanan, Tennessee; *E. G. Carr, New Jersey; *Prof. Francis Jager, Minnesota; Allen Latham, Connecticut;

*Frank Rauchfuss, Colorado.

*Expected to be present.

From the Committee on Local Arrangements, of which the Chairman

is Mr. Wesley Foster, of Boulder, Colo., announces that a large attendance is anticipated. Elsewhere notice will be found concerning reduction of rates on the certificate plan for points in Colorado. Those in Colorado attending the Convention should inquire concerning rates of their ticket agent.

For the entertainment of the guests at the Convention, the Committee on Local Arrangements has made the following suggestions: that time be devoted to sightseeing while in Denver; and that a banquet be a feature of our entertainment, at which honey cookery will be introduced. Presumably at this banquet will be distinguished guests from the State of Colorado, including, it is hoped, the Governor.

Throughout the Convention, the Committee has arranged for luncheon parties of groups of our members, so that the acquaintanceship may be enlarged in so far as possible.

The Colorado Agricultural College weekly bulletin, sent to all the country papers of the state, is being used to promote the interests of the Association.

Mr. Foster has further planned for the seventeen county inspectors of Colorado to be present. This will mean a session devoted to apiary inspection at which all inspectors and those interested in this phase of apiculture will attend.

As usual, a group photograph of the Convention will be made.

Special provisions are being made and entertainment provided for ladies in attendance.

Exhibits will be in charge of a custodian. Presumably some of these demonstrations will be held at the warehouse of the Colorado Honey Producers' Association, Mr. Frank Rauchfuss in charge.

Among the distinguished and scientific guests, it is hoped that the State Entomologist, Prof. C. P. Gillette, and President of the College, Dr. C. A. Lory, will favor us with addresses. Professor Gillette is in charge of the inspection work of the State and is therefore vitally interested in beekeeping projects.

For those having lantern slides or illustrated lectures, a stereopticon will be arranged. It is desirable that those wishing the use of the stereopticon communicate directly with Mr. Wesley Foster, Boulder, Colo.

The program has now become so

extended that the sessions will be divided into sections whereby it will be possible to fully carry out the plans. This will eliminate the somewhat tedious executive details from the general sessions for the purpose of reading papers and the discussion of subjects concerning beekeeping. Complete details of the program, arrangements and division into sections will be available at Denver, February 16.

There will also doubtless be evening programs of interest to particular groups.

It is suggested that an informal evening in the nature of a Smoker be held for sociability and general discussions.

B. N. GATES,
President.

January 14, 1915.,
Amherst, Mass.

New Plymouth, Idaho,
December 31, 1914.

The Bee-Keepers' Review,
North Star, Mich.
Gentlemen:—

It may interest you to know that the S. Idaho-E. Oregon Bee-Keepers' Association has been reorganized into an incorporated company, which will be known as the Idaho-Oregon Honey Producers' Association.

The officers and directors are as follows:

C. E. Dibble, President, Payette, Idaho.

J. M. Stark, Vice-president, Middleton, Idaho.

P. S. Farrell, Sec'y-Treas., New Plymouth, Idaho.

Directors

Wm. McKibben, Ontario, Ore.

W. H. Pennington, Ontario, Ore.

A. I. McClanahan, Payette, Idaho.

Benj. Paine, Parma, Idaho.

L. C. McCarty, Nampa, Idaho.

Homer Cheney, New Plymouth, Idaho.

Yours very truly,

P. S. FARRELL, Sec'y.

Members and visitors will be met by autos at the Union Station and taken to headquarters at the Auditorium Hotel free of charge. We will have to have the names and time of arrival of all the visitors three days in advance, in order to make proper arrangements.

WESLEY FOSTER, Chairman.

The National Convention, Denver, Col., February 16-17-18, 1915

Auditorium Hotel, Corner Fourteenth and Stout Streets.

This convention will be a notable one in many particulars.

The number of highly valuable addresses and papers presented will be very large.

The exhibits will be large and a custodian and demonstrators will assure the best possible service to the exhibitors and visitors.

The entertainment features will give diversion from the serious proceedings of the convention.

A banquet is being arranged for.

There will be an auto trip if the weather permits.

Ladies will find the convention interesting and special arrangements are being made for their comfort and pleasure.

Lectures, illustrated with the stereopticon are being arranged for.

The seventeen county inspectors of Colorado are all expected to be present and a special inspectors' conference will be held.

Beekeepers from many states have signified their intention of attending.

The Committee on Local Arrangements is enthusiastic in anticipation of a large and highly pleased attendance.

Committee on Local Arrangements.

Wesley Foster, Chairman, Secretary Colorado State Bee-Keeper's Association.

N. L. Henthorne, President Colorado State Bee-Keepers' Association.

L. F. Jouno, Treasurer Colorado State Bee-Keepers' Association.

Special Reduced Rates for the National Conv. Feb. 16-17-18

Special rates will apply from all Colorado points to Denver, February 14, 15, 16, 1915, and returning February 18 and 19. TERMS OF SALE BELOW.

Persons desiring to attend meetings, conventions, etc., for which rate on the certificate plan is authorized from points within the state of Colorado, should be governed by the following:

On one of the authorized dates of sale purchase a one-way ticket to point at which convention takes place, procuring from the ticket agent a certificate. In case agent at starting point is unable to sell through

ticket, purchase to junction point and from there repurchase to point of meeting, procuring a certificate from each agent from whom ticket is purchased.

On arrival these certificates should be signed by the Secretary of the meeting and presented to the Joint Agent not later than one day after the meeting closes; Sunday not to be counted. The Joint Agent, in case 50 or more certificates have been presented to him, will honor same, selling ticket to return destination at one-third the regular fare. In case of passengers who have been unable to purchase through tickets and who present two certificates the Joint Agent will stamp both, selling ticket to junction point, and on presentation of the second certificate at such junction point passenger can repurchase to return destination also at the reduced fare. These return tickets to be first-class limited, good only on date of sale and for continuous passage through. Certificates of tickets purchased on clergy permits at less than full tariff rate, and certificates of tickets purchased at less than fifty cents will not be recognized in computing the total of 50.

The roads which will authorize this rate are as follows:

A. T. & S. F. (Santa Fe)
C. B. & Q. (Burlington)
C. R. & P. (Rock Island)
COLO. & SOUTHERN.
COLORADO MIDLAND.
D. & R. G. (Denver & Rio Grande)
FLORENCE & CRIPPLE CREEK.
MIDLAND TERMINAL.
MISSOURI PACIFIC.
UNION PACIFIC.

NO CLAIM FOR REFUND OF
FARE ACCOUNT OF MISUNDER-
STANDING OR FAILURE TO FOL-
LOW INSTRUCTIONS WILL BE
ENTERTAINED BY THE RAIL-
ROAD COMPANIES.

Boulder, Col., Jan. 16, 1915.

The Bee-Keepers' Review.

The Governor of Colorado (George A. Carlson) has been invited to welcome the National Convention to Colorado. No reply has been received as yet, but expect an acceptance soon. Mayor J. M. Perkins will greet the convention for the City of Denver.

The Auditorium Hotel convention room will seat one hundred and fifty to one hundred and seventy-five people comfortably. For the most large-

ly attended sessions we have secured the Tramway Auditorium, three blocks from the hotel. This is an ideal convention room equipped with permanent motion picture and stereopticon apparatus. The Denver Convention League furnishes us this room for four sessions complimentary.

Yours as ever,

WESLEY FOSTER (Chairman).

Those Who Will Attend the National Meeting at Denver

Those who have signified their intention of attending the National Convention at Denver this month are listed below. Of course, this list is but a handful of what the attendance will be, but are those whose names have reached this office. The list is as follows:

B. F. Kindig, Elkhart, Ind.

Prof. F. E. Millen, East Lansing, Mich.

Prof. C. H. Baldwin, Indianapolis, Ind.

Geo. W. Williams, Redkey, Ind.

Prof. C. E. Bartholomew, Ames, Iowa.

E. J. Baxter, Nauvoo, Ill.

J. M. Buchanan, Franklin, Tenn.

E. G. Carr, New Egypt, N. J.

C. P. Dodant, Hamilton, Ill.

Wesley Foster, Boulder, Colorado.

Prof. Francis Jager, Minn.

Frank C. Pellett, Atlantic, Iowa.

Prof. Morley Pettit, Canada.

Dr. E. F. Phillips, Washington, D. C.

Frank Rauchfuss, Colorado.

E. R. Root, Medina, Ohio.

E. D. Townsend, Northstar, Mich.

Dr. Burton N. Gates, Amherst, Mass.

A. G. Woodman, Grand Rapids, Mich.

J. J. Corbut, Colorado.

Robert E. Foster, Colorado.

G. H. Rea, Ohio.

J. H. Stoneman, Idaho.

The Colorado Honey Producers' Association will give a banquet to the members of the National Association the evening of February 17th, between the hours of six and eight o'clock. Those who are not members may purchase tickets, and are urged to do so, as it is desired to make of it a big beeman's gathering. Tickets will be issued free to all National members.

WESLEY FOSTER, Chairman.

The History of Beekeeping in California

By J. E. PLEASANTS, Orange, California

Read at N. B. K. A. Convention, St. Louis, Mo. 1914

The history of beekeeping in California is the history of beekeeping on the Pacific Coast, the first bees west of the Rockies being brought to California.

Beekeeping, as well as other industries, was introduced into the west by men of courage and enthusiasm. The distance from the older settled centers was great; travel was slow, accomplished by primitive methods and fraught with difficulties.

We are indebted to that intrepid enthusiast, John S. Harbison, for the beginning of our industry. From Mr. Harbison's own account we get the following data of the pioneer apiary of California. John Harbison came to California in 1854, and for two years he studied the flora of the state, while engaged in the nursery business. At the end of this time, he sold out his nursery and returned to his old home in Lawrence County, Pennsylvania, with the intention of bringing out bees.

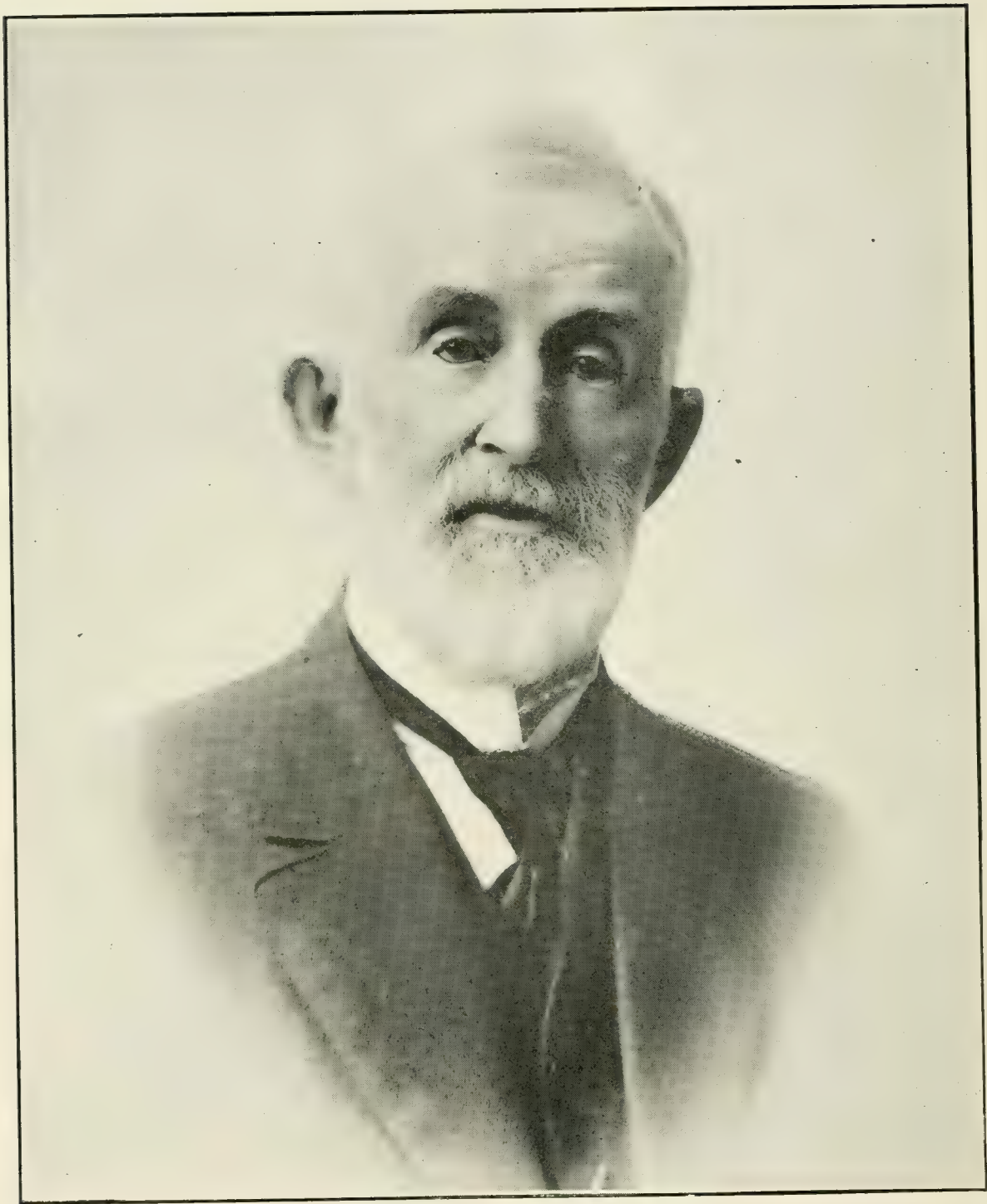
Mr. Harbison had learned the care of bees from his father in boyhood, so was well equipped for his undertaking. He tells of the care with which he prepared his shipment, which was to make the long journey by water from New York to San Francisco via the Isthmus. The lumber for his hives he had sawed three-eighths of an inch thick, to save weight, as the freight from Newcastle, Pennsylvania, to San Francisco was something like one dollar per pound. The hives, of course, were small, so he added a chamber about 3 x 8 x 13, well ventilated with screen, as a place for the bees to get off the combs and carry out the dead. He started with one hundred and sixteen colonies, and lost only six on the journey. Being a man of pleasing address, Mr. Harbison made friends with all with whom he came in contact, and was accorded all possible assistance by the ship's officers. His first apiary was located in the Sacramento Valley. He readily sold all which he was willing to dispose of at one hundred dollars per colony, and mentions colonies being re-sold at two hundred dollars. The cost of bringing the

one hundred and ten colonies from Pennsylvania to California was about eighteen hundred dollars.

Mr. Harbison made the first shipment of honey that went east from California. This was sent with the first carload of green fruit that was shipped to Chicago. In 1869 Mr. Harbison moved his bees to San Diego County, in the extreme southern part of the state, where he continued in the business until the time of his death, something over a year ago. At one time he kept 3,750 colonies, divided into twelve apiaries. He sent the first carload of honey to go east from his San Diego apiaries. This honey was sold in Chicago at twenty-seven cents per pound.

Mr. Harbison was always a producer of comb honey. He invented a hive which was used in California until the introduction of the Langstroth hive here. Being a comb honey producer, his hive was designed rather more for that purpose. It contained two pound sections. He was at one time one of the largest comb honey producers in the world, and took many prizes for his exhibits at the Centennial and later Expositions. Even a short time before his death, he outlined a plan for a model apiary to be placed on the San Diego Exposition Grounds in 1915. This, I understand, is to be carried out. He was the author of a book on beekeeping, and a man whose interest in his chosen pursuit never flagged. In fact, John Harbison was to the Pacific Coast what Father Langstroth was to the Nation.

Among other pioneer beekeepers of Southern California were Major Sherman, O. W. Childs, John R. Rowland, and the late John G. Corey. An interesting story of Mr. Corey, which well illustrates his determination to overcome difficulties, is told in "Gleanings," August, 1912. It tells of his early days in California as a mail carrier in the mountains. On one of his trips he bought a small hive of bees—probably a nucleus. This he carried on his shoulders over a hundred miles—part of the way on snow-shoes.



JOHN S. HARBISON, DECEASED

Mr. William Muth-Rasmussen, now a comb honey producer of Inyo County, California, was one of the prominent beekeepers of Los Angeles County in the early '70s. As far as can be learned, he was the first on the Pacific Coast to use an extractor. He brought out a Peabody extractor in 1871. Prior to this all liquid honey was rendered out in the sun-extractor.

Mr. Muth-Rasmussen writes that about three years after this he found others using home-made extractors run by gear wheels. In 1873 Mr. Muth-Rasmussen and Capt. J. T. Gordon called a meeting and organized the Los Angeles County Bee-Keepers' Association. This was the first beekeepers' association on the Pacific Coast. John Beckley was the first to

use the Langstroth hive in California. This was about 1872.

In the beginning of beekeeping as a business, we had several problems to work out. The package problem was one of the most complex, but also the quickest solved. We used kerosene cans mostly, though some used barrels. The experience of some of those who used barrels is harrowing to relate. I had two neighbors who stored their honey in barrels one season, waiting for a better price. They never got it. All through that winter, which was rather dry, the honey leaked out, just about as fast as the bees could take it up. My bees went through that winter fine, as they were near enough to my neighbors' honey barrels to use them as feeders. Those of us who used the kerosene can will never forget those days of cleaning and soldering when preparing for a honey flow. But from the ancient kerosene can we evolved the modern honey can and case—California's bequest to the extracted-honey producers of the country.

The price of honey was good for a few years; then it dropped very low. I remember selling extracted honey in the local market in 1875 for nine cents. But from 1877 until about 1884-1885, the beekeeper was often in luck if his extracted honey netted him three cents. The cause of this was exorbitant freight rates on the one hand and the treatment we received at the hands of the San Francisco Commission men on the other. In fact, matters got so bad that producers of honey quit sending their product to the commission houses. That forced the buyers to come into the field, and we at least had the satisfaction of selling our own honey. Prices gradually grew better, and while the marketing problem is still with us, we have solved several phases of it.

Our extracted honey is practically all sold in large lots. It is cased up and shipped by the carload. There is very little retailing done by the producer. Extracted honey leads by far in quantity, though there are some large producers of comb honey. Mr. Muth-Rasmussen, who now resides in Inyo County, California, runs his apiary exclusively for comb honey, as I believe do most of the other apiarists of the Owens River Valley section.

Up to about twenty-five years ago,

most of the honey of California was produced in the southern part of the state, and almost exclusively from wild plants. Now, beekeeping is a thriving industry in the northern part of the state and in the large interior valleys. And while we still depend upon our wild plants for our mountain apiaries, the bee forage along the foothills and in the valleys has been greatly increased by the large acreage planted to oranges and beans in the coast counties, and by the large alfalfa fields of the interior valleys. The Sacramento and San Joaquin Valleys have hundreds of thriving apiaries fed by alfalfa and lupia. Alfalfa does not furnish nectar in the cool coast climate to anything like the extent that it does in the warm inland regions.

Another new section, rich in the production of honey, as well as almost countless other resources, is the Imperial Valley, lying in the extreme southeastern part of the state. This valley is truly one of the wonderlands of the southwest; a reclaimed desert, as it were, but with a soil rich in silt washed for ages from the overflow of the Colorado River—soil which only needed water to produce almost anything in the dry, warm climate in which it lies. Water it now has in abundance, and its alfalfa fields yield an ample supply of nectar for thousands of colonies of bees.

The County of Imperial has now about 30,000 colonies of bees; Los Angeles County, over 60,000; Riverside, about 30,000. Orange, which is the smallest Southern California county, has about 10,000. These are just a few figures to give some idea of the average number of bees kept in the honey-producing counties. I was unable to get data in time from the north.

Honey is not produced commercially in all parts of California. In the last twenty-five years the industry has increased materially. We still produce as much from our native plants, and the great increase of forage from the cultivated acreage has enabled many more to engage in beekeeping. The wild pasturage, however, is thoroughly stocked. There is little room for beginners unless they buy an old range.

Among our native plants, the sages lead, especially in quality. The black and white are equally good, though the black leads in quantity. Then follows a long list, some of the best

being California sumac; the so-called wild alfalfa (*nosarkia glaber*); "wild buckwheat" (an *eriogonum*); the coffee-berry; and in the north, the lipia.

The state has a good Foul Brood Law, providing for an inspector for each county where the beekeepers demand one. The system of inspection has been thorough—the inspector giving his entire time to the work during the months of the year when inspection is practical. In this way American Foul Brood has been greatly decreased and is altogether under control. European Foul Brood exists in some localities, but we hope to be able to stamp it out.

The California law forbids the moving of bees from one section to another without a certificate of health from an authorized inspector.

Almost all of the beekeeping counties have county clubs. We consider these a great advantage to us in securing our supplies and in keeping prices where they belong, as well as in keeping in touch as a mental and social stimulus.

Among our leading beekeepers—those who number their colonies by the hundreds and in some instances by the thousands—are Messrs. Mendelson, Emerson Brothers, Hauser, Hogaboom, George Joplin, Mercer, and Culver.

We have a growing number of good queen-breeders, among whom are Ralph Benton, Henry Perkins, W. H. Rails, and George J. Brown.

Italians are mostly in use here, though Cyprians, Carniolans, and Caucasians to some extent, and of course there are plenty of hybrids.

Out-of-Door Wintering of Bees

(Continued from page 48)

spring.

If you had a thrifty young queen early in the fall to rear brood so that they had a nice cluster of young bees to start with, they will surely be in nice shape to start the heavy early flow; but if the queen was old and did not lay much in the early fall, these old bees will dwindle out in the spring and if the season has been rather backward will likely all die before young bees can be reared to take their place.

Now, really, there are but a few things to see to, to winter successfully, and if you do look after them you will surely succeed, but if you

neglect them you will fail. You older apiarists know the secret to success. I'll go over the list of things to be done, just for the sake of the novice and as a reminder. Here it is—simple, but absolutely necessary to success: Any kind of a hive, but a good thrifty queen, a fair amount of young bees, plenty of good stores, (nothing better than good granulated sugar syrup) and the colony stored in a good cellar or packed warm and dry out of doors, will winter in nearly every case.

(Concluded in March Number)

The Review Half Paid For

On January 1st, we paid our interest on the Review Debt, \$42 from the general fund, as usual, and on the same date paid \$200 on the principal, from the Review debt subscription list. This makes \$500 and interest paid, making the Review half paid for, leaving the subscription account stand thus:

Amount previously acknowl-	
edged	\$10.35
James M. Mundell, Hobart, Ind.	2.50
M. W. Mallory, Batavia, N. Y..	1.00
Miss A. R. Wheeler, New Lon-	
don, Conn.	1.00
C. J. Grass, Hanna, Ind.....	1.00
Wm. H. Berry, Shelby, Mich...	1.00
Thomas W. Garrison, Albany,	
N. Y. ....	.50
W. Ritter, Genoa, Ill.....	.50
David Running, Filion, Mich...	2.50
C. H. Abbott, Palms, Mich....	1.00
A. M. Wheeler, Jr., Public	
Health Bureau, Washington,	
D. C.	1.00

As our contract with Mr. Tyrrell becomes due two years from the first day of next June, it will be noticed that we have some more than \$200 per year to raise, to meet this obligation. We surely should swell this \$22.35 to at least \$200 by the end of the year. You will not miss a dollar or two. Let this little amount come forward.

*Be a National Member
and
A Review Subscriber*

ANNOUNCEMENT

...The Burlington Route...

National Bee-Keepers' Association
DENVER CONVENTION

February 14th to 18th Inclusive

For the convenience of the attending members and their friends special tourist sleeping cars will be reserved on Burlington train No. 3, leaving Union Station (Canal and Adams Streets) Chicago, Sunday, February 14th, on the following schedule:

Leave Chicago	-	11:00 p. m.
“ Galesburg	-	3:53 a. m., 1st Day
“ Burlington	-	5:20 a. m., 1st Day
“ Omaha	-	4:10 p. m., 1st Day
“ Lincoln	-	6:00 p. m., 1st Day
Arrive Denver	-	7:20 p. m., 2nd Day

Members from Peoria, St. Louis, Kansas City and other points should arrange to join the official party at the most convenient junction point. For additional information and reservations in the Beekeepers' special cars, you should write A. J. Puhl, G. A. P. D., Burlington Route, 141 South Clark Street, Chicago, Illinois.



J. FRANCIS, Gen. Pass. Agt.
 C. B. & Q. R. R.
 Chicago, Ill.



Subscriptions to the Review received during 1914 through our secretaries. The contest among our secretaries ending December 31st, 1914, securing subscribers for the review, stands as follows. The five sending in the greatest number and entitled to a year's complimentary subscription to the Review are as follows:

James A. Stome, Ill.....	143
Gus Dittmer, Wis.....	43
L. C. Dadant, Ill.....	40
P. R. King, Ohio.....	34
Geo. W. Williams, Ind.....	32

Secretaries sending in ten or more subscribers during 1914 and the number sent are listed below:

H. E. Graham, Texas.....	27
S. W. Snyder, Iowa.....	24
H. E. Gray, N. Y.....	22
F. E. Millen, Mich.....	22
L. T. Rogers, La.....	21
E. G. Carr, New Jersey.....	19
J. S. Whittemore, Mass.....	18
E. J. Winder, Utah.....	15
P. E. Crane, Vt.....	15
Floyd E. Smith, Ore.....	13
Dr. L. D. Leonard, Minn.....	11
N. B. Gates, Mass.....	10

We thank you, gentlemen, and hope to be able to return the favor many fold during 1915 by sending you members in return.

Shall the National act as brokers in the purchase of beekeepers' supplies for the members during 1915?

This will depend upon how you instruct your delegate to vote at the next February meeting, for it will be up to that august body to accept or reject that clause of the proposed change of our National Constitution, as well as other proposed changes.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS — Lowest price.
PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON Ontario, Ore.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia Pa.

FOR SALE—Extracted honey, light amber flavor similar to Clover and Basswood mixed. Car lots or less in 600 lb bbl. at 6c per lb. F. O. B., N. Y., Key West or New Orleans, sample 10c. M. E. ENGLE, Herradura, Cuba.

FOR SALE—50,000 pounds light extracted honey, well ripened and mild flavored. Two sixty pound cans to case, 7½ cents by the case, in ten case lots, even seven cents per pound in fifty case lots. Write H. G. QUIRIN, Bellevue Ohio.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIRS, North Yakima, Wash.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

CHICAGO—The market on comb honey is of small volume, but prices are steady and are likely to continue so for the rest of the winter. The best grades of white comb are bringing 16c to 17c per lb., ambers from 1c to 3c per lb. less. Extracted honey is also quiet with an abundant supply. In a small way white clover and linden brings 9c to 10c per lb. No report of carload sales. Other kinds of white honey are not at all active and prices vary according to quantity. Beeswax is slow of sale at about 30c per lb.

R. A. BURNETT & Co.,
Jan. 15. 173 W. South Water Street.

Try the Review's Classified department.

FOR SALE—Fine well ripened white clover honey in 60 pound cans, also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—Extracted clover honey thoroughly ripened and of fine quality. Put up in new cans two in one case. JOS. HANKE, Pt. Washington, Wisc.

FOR SALE—Choice Aster Honey, with rich and delicious flavor, packed in 60 lb cans, two in a case, @ 7c. per pound, F. O. B., H. C. Lee, Box 254, Brooksville, Ky.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horse-mint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

BEES AND QUEENS

FOR SALE—25 colonies of bees heavy with stores that will be sold at a bargain. No disease. Write for further particulars. Address G. M. Withrow, Mechanicsburg, Ill. tf

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. BEEBE, Mosinee, Wis., Route No. 1.

FOR SALE—Twenty-five colonies of heavy, healthy bees. Forty comb honey supers complete. Empty bodies, etc. Two incubators. Two horse engine, with saw and feed grinder. Address G. M. Withrow, Mechanicsburg, Ill.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

FOR SALE—Untested Italian Queens. Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

500 SAMPLE QUEENS at 40c on first 500 orders. Moore's Strain Leather Covered Italians. Write for particulars and prices in quantity. April and May orders booked now on 10 per cent deposit. Orders filled promptly, or notice given when such deliveries can be made. Regular prices: Untested Queen, \$.75. Six \$4.25; Twelve, \$8.00. OGDEN BEE & HONEY CO., Ogden, Ut., Timberling Riggs, Breeder. tf

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5¾ in. depth supers nailed and painted (220-10 fr. 40-8 fr. ext. sup. 5¾ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address WM McKIBBEN, Ontario, Ore.

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part of all their bees. Figures following address indicate number of colonies each have for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Wilmer Clark, Eastville, N. Y.—150.
A. S. Crotzer, Lena, Ill.—94.
G. M. Withrow, Mechanicsburg, Ill.—25.
L. R. Beebe, Mosinee, Wis.—200.
Wm. McKibben, Ontario, Ore.—160.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—300 lbs. unhulled yellow sweet clover seed. L. P. Holms, Newcastle, Wyoming.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

We have at Plano, Ill. 200 lbs. unhulled white sweet clover seed that we can furnish at 13c per pound. You should order 50 lbs. or more to get this rate. Order through the Review office.

RAW FURS—Honest grade and full market price shipments held separate on request. I pay charges on lots worth \$10 or over. You get value rec'd when you ship so ask for price list and mention Review. GEO. KRAMER, Valencia, Pa.

White Sweet Clover Seed

We have at Syracuse, N. Y. 250 lbs. Unhulled white sweet clover seed that we can sell in 25 lb. or more lots at 16c. per pound. The market of white sweet clover seed is very firm, and we advise the forehanded purchaser to buy early, while the stock is large. Address The BEE-KEEPERS' REVIEW, Northstar, Michigan.

We have for sale at Plano, Ill. 100 lbs. of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb., in 50 lb. lots or more. Address The Bee-Keepers' Review, Northstar, Mich.

We have a quantity of white sweet clover seed at Buhl, Idaho that we can furnish our members as long as it lasts at 20c a pound of hulled seed and 13c for the unhulled variety. You should order 50 lbs. to get this low rate. Address THE BEE-KEEPERS' REVIEW, Northstar, Mich.

White Sweet Clover Seed

We have for sale in Buhl, Idaho, a quantity of unhulled white sweet clover seed that we can furnish as long as it lasts at 12c per pound on track there. Also some Hulled white at 20 cents a pound there. To get these low prices the order should be for not less than 50 pounds of one kind. Address

THE BEE-KEEPERS' REVIEW
Northstar, Michigan

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg'rs. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express @ \$5.41. Cash with order.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE—At reasonable prices for cash and terms, very fine Apple Orchard in bearing, located in the GREAT PE-COS VALLEY. Will sell in 5, 10 and 20 acre tracts, full water rights in Northern Carrol. Clear title. Will sell my home place, that is nicely improved. Have some valuable vacant acres to dispose of. Also a fine small Alfalfa farm, fairly well improved. All of this property lies in or close into the town of Hagermon, N. M., a growing little city of 500 people.

Will sell 50 to 100 colonies of healthy BEES with each tract of land if desired, or will sell BEES separately. This is the land of Sunshine, a country of the BIG RED APPLE, ALFALFA and HONEY. A failure in crop is unknown. The elevation is 3500 feet, a residence here is a sure cure for Asthma, throat and lung trouble. Reason for selling, Owner retiring from active work. HENRY C. BARRON, Hagermon, New Mexico.

A Bee Location in Northern Michigan For Sale

Are you now in a paying location for honey? Does your crop each year amount to as much as it ought? Would you like to move to a Northern Michigan Raspberry location where crops rarely ever fail? Wouldn't it be fine if you could move right into such a place with the cellars and honey houses all built! Then there is a log-cabin where you can "camp in" thrown in, 45000 lbs. of honey harvested in yards in northern Michigan two years ago, and this is the same location. 400 colonies are now wintering in the three cellars, but they will be moved out in the spring. Then the buildings and cellar and good will, will be sold. If you are interested in a good thing, address Raspberry Location, Care BEE-KEEPERS' REVIEW, Northstar, Michigan.

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, are furnished at 30c. per thousand postpaid. Advertise Honey. Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to

PEARL CARD CO., Dept. A3, Clintonville, Conn.

Start the Season Right

by using

DITTMER FOUNDATION

the bees like it for it's made to just suit them and is just like the Natural Comb they make themselves.

Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

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Gus Dittmer Company
AUGUSTA, WIS.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

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Every day in your talk and reading, at home, on the street car, in the office, shop and school you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *jujutsu*. What is *white coal*? This New Creation answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority*.

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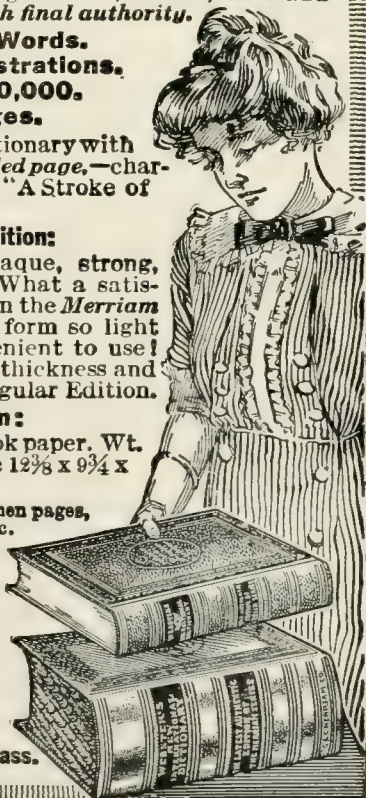
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A B C and X Y Z of Bee Culture, cloth....	\$2.00
A B C and X Y Z of Bee Culture, half leather....	2.40
A B C and X Y Z of Bee Culture, German....	2.50 3 lbs.
A B C de L'Apiculture French ed.....	2.00
El A B C Y X Y Z de la Apicultura, Spanish....	2.00
Langstroth on the Hive and Honey Bee Reprint....	1.00
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Biggle Bee Book....	.50
British Bee-keepers' Guide-book, Cowan....	1.00 1 lb.
Cook's Manual of the Apiary	1.15 2 lbs.
Doolittle's Queen-rearing..	.75 1 lb.
Fifty Years Among the Bees, C. C. Miller....	1.00 2 lbs.
First Lessons in Bee-keeping	.50
Honey-bee, The—Cowan..	1.00 1 lb.
How to Keep Bees — Mrs. Comstock....	1.00 2 lbs.
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Irish Bee Guide, Rev. J. G. Digges....	1.00 1 lb.
Langstroth, rev. by Dadant, ed.....	1.25 2 lbs.
Modern Bee-farm, S. Simmins	2.00 2 lbs.
Practical Bee Guide....	1.00
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Wax Craft....	1.00
Increase Forcing the Queen to Lay; each....	.25 2c.
French edition, separate...	.50 2c.

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Bee People, The, Margaret M. Morley....	\$1.50 2 lbs.
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Bee Master of Warrilow, The —Edwards....	.57 1 lb.
Lore of the Honey Bee....	2.00
Queenie....	.75
Bee Models.....each 50c; 2 for 75.	
Ten-cent Library Booklets..	.10
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.....50c each, 3 for \$1, 5 for \$1 50	

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A B C of Carp Culture.....	\$0.30 1 lb.
A B C of Potato Culture, paper....	.57 1 lb.
A B C of Potato Culture, cloth.....	.85 1 lb.
A B C of Strawberry Culture, paper....	.50 1 lb.
A B C of Strawberry Culture, cloth....	.75 1 lb.
Tomato Culture....	.40 1 lb.
Tile Drainage, W. I. Chamberlain....	.40 1 lb.
Maple Sugar and the sugar-bush, paper....	.30 1 lb.
Winter Care of Horses and Cattle, paper....	.30 1 lb.
How to Keep Well....	1.00
The Dollar Hen....	1.00
What to Do, paper....	.50
What to Do, cloth....	.75

Address All Orders

THE BEE-KEEPERS' REVIEW
Northstar, Michigan

WANTED—Reliable man experienced in comb and extracted honey production. J. E. PATTON, Halleck, Nevada.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

James T. Johnson, R. F. D. No. 1, Percy, Ill.
 Henry J. Zinn, 1135 Who. Ave., Forty Fort, Pa.
 Rocky Mountain Bee Co., Forsythe, Montana
 H. H. Thale, Maywood, Mo.
 E. S. Smith, Westville, Ind.
 B. F. Kindig, Elkhart, Ind.
 Walter C. Morris, Yonkers, N. Y.

Ladies we need the cash!



59¢ for a \$1.50 Waist means 91¢ to YOU

10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 seller must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four. Your money refunded if not satisfied.

GENERAL SUPPLY CO.
 168½ BZ Delancey Street
 New York City

National Members Having Honey for Sale

We are herewith submitting a list of subscribers having honey for sale. This list only includes those who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free, two insertions, to paid-in-advance subscribers to the Review, each year. Those wanting their name to appear longer can do so by paying 20c each additional issue. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzl, Lincoln, Ill.

HORSEMINT

Wilmon Newel, College Station, Tex.

RASPBERRY

O. H. Townsend, Butterfield, Mich.

ALFALFA

Wesley Foster, Boulder, Colorado.
 Arizona Honey Exchange, Tampe, Arizona.

A. A. Lyons, Fort Collins, Colo.

AMBER

Quirin-The-Queen-Breeder, Bellevue, O.
 Thos. Worthington, Leota Landing, Miss.
 Latshaw Honey Co., Carlisle, Ind.
 Penn. G. Snyder, Aibonito, P. R. -d4.
 O. P. Hendrix, West Point, Miss.
 G. Frank Pease, Shreveport, La.
 A. D. Herold, Box 186, Sonora, Cal.
 R. A. McKae, Velasco, Texas.
 F. M. Morgan, Hamburg, La.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.
 N. E. France, Platteville, Wis.
 F. Gobeli, Glenwood City, Wis.
 M. C. Engle, Herradura, Cuba.

WHITE CLOVER

Wm. Fox, Withee, Wis.
 Wm. E. Prish, Mineral Point, Wis.
 Quirin-The-Queen-Breeder, Bellevue, O.
 A. H. Fralick, Homer, Minn.
 Joseph Kurth, Mineral Point, Wis.
 E. B. Rosa, Monroe, Wis.
 C. J. Oldenberg, Belle Plains, Minn.
 J. H. Allemier, Delphos, Ohio.
 F. M. Morgan, Hamburg, La.-4.

BUCKWHEAT

N. L. Stevens, Route No. 18, Venice Center, N. Y.
 Jas. McNeil, Hudson, N. Y.
 E. J. Stahlman, West Berne, N. Y.

HWAJILLA

Frank Talbot, Pearsall, Texas.

SAGE

George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.
 R. J. Krause, Dehesa, Calif.

....The....

Canadian Horticulturist and Bee-Keeper

The Only Bee Publication in
Canada

It is the official organ of the Ontario Bee-Keepers' Association and has incorporated with it the former Canadian Bee Journal.

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"The Pearce Method of Beekeeping"

The Pearce method of Bee-keeping is now being revised and brought up to date. The first edition of 5000 copies have been some time out of stock and Mr. Pearce is now rewriting the entire work and bringing it up to the very minute. It will be the same size as the old volume, but contain many more pages. The new work will be ready for delivery by early spring. Price 50c post paid, or clubbed with a year's subscription to the Review for only \$1.10.

Address the sole agents

The Bee-Keepers' Review
Northstar- Michigan

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In the following combinations we offer periodicals of sterling worth. Remember, you are not receiving some premium of questionable value, but a saving of dollars and cents on your 1915 reading matter. The combination offers with the reduction we are able to allow are as follows:

The Review	\$1.00	All five
Woman's World	.50	\$1.25
Household Magazine	.50	the bargain
People's Popular Monarchy	.50	of the
Farm Life	.50	season

Total value \$3.00

Here is another good one:

The Review	\$1.00	Both for
The Youth's Companion	2.00	only \$2.25

The following are of
sterling cash value:

The Review	\$1.00	Both for
American Bee Journal	1.00	only \$1.50

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The Review \$1.00 \$4.00 worth
Everybody's Magazine 1.50 for only
The Delineator 1.50 \$2.70

Another is:

The Review	\$1.00	Both for
Reliable Poultry Journal	.50	\$1.25

The Review	\$1.00	Both for
Gleanings in Bee Culture	1.00	only \$1.50

The Review	\$1.00	\$3.00 cash
Gleanings in Bee Culture	1.00	value for
American Bee Journal	1.00	only \$2.00

Special offer to new subscribers. To those ordering early before the supply is exhausted, we will send in connection with any of the above combinations, the last eight months of the Review for 1914, which contains the National convention report with many valuable papers read at said convention, besides other articles of value not appearing in other papers. Address with remittance.

The BEE-KEEPERS' REVIEW, Northstar, Michigan

GRAY CAUCASIANS

When this bee was first imported, three queens came to me direct, resulting in the revolutionizing my (then) small bee business, to that of 3,000 colonies in 53 yards, as at present. Improvement in stock has been my chief aim. In true value they have no equal and a queen from one of the colonies of my great bee business will prove it. For full particulars and prices, write

J. J. WILDER, Cordele, Ga.

Tumbler Shaped Jellies for Members

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them.

Six oz. Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz..	\$4 50
Gross in 2 doz. paper reshipping case.....	2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs honey, Bbl. of 21 doz..	3 75
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Prices are f. o. b. Columbus, Ohio.

Address all orders to

NATIONAL BEE-KEEPERS' ASS'N
Northstar, Michigan

Note We call the members' attention to the fact that the above prices are a considerable lower than that of the glass trust.

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50.....	\$5 50
1/2 gallon can including mailing case, per crate of 100.....	9 50
1/4 gallon can, including mailing case, per crate of 100.....	7 50

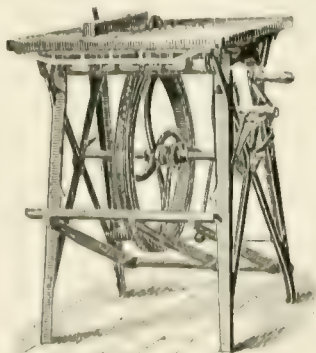
We cannot furnish less than a full crate of the above at any price.

If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

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SEND FOR CATALOGUE.

W. F. & JNO. BARNES CO.

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ROCKFORD, ILLINOIS

American Bee Journal

ANNOUNCES

Two Big Features--Beginning Jan. 1915

FRANK C. PELLETT, well known lecturer, naturalist and State Inspector for Iowa will write a series of articles well illustrated on "**Honey Flora of the United States.**"

QUEEN REARING IN ITALY. While in Italy last year, C. P. Dadant, had the opportunity to visit a modern queen-rearing establishment. He states that it is the finest and best kept apiary and queen establishment he has ever seen. Full particulars with illustrations in January number.

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Begin Your Subscription with January 1915--\$1 a Year

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Hamilton - Illinois

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Gentlemen:—Your bill for working my beeswax received this A. M. I am enclosing check to cover same. You got me a good deal more beeswax than I could and I got rid of a mussy job.

A. L. KILDOW,

State Inspector of Apiaries.

Putnam, Ill., April 13, 1914.

Many other prominent beekeepers write us this way. Our outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

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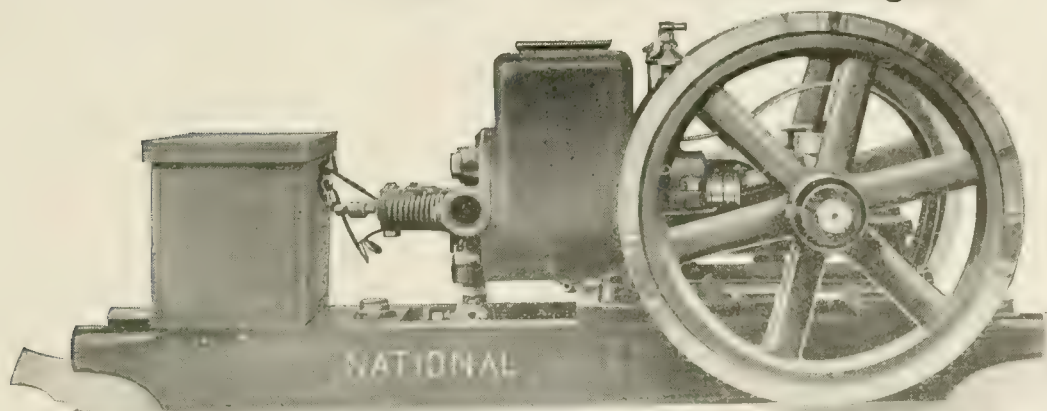
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The Reliable Poultry Journal is one of the very best poultry journals published and regularly sells for 50 cents a year. If you keep poultry, we would recommend the Reliable as the very best Journal for you to take in connection with the Review. Both only \$1.25 for a whole year. Canadian postage 25 cents additional. Address The Bee-Keepers' Review, Northstar, Mich.

WANTED— White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

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The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

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on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1½; bore, 3¾; stroke, 4½; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1¼; floor space, 9x36; shipping weight 200.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to the National Beekeepers' Ass'n, Northstar, Michigan.



Members who want to use some of those little cuts, either those reading "EAT MORE HONEY" or "KEEP MORE BEES," or cut without reading for their letter heads, envelopes or circulars can be furnished with them for 50c each, postpaid. Address

THE BEE-KEEPERS' REVIEW,
Northstar, Michigan.

Working Beeswax

In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500 lbs.	300 lbs.	100 lbs.	50 lbs.	25 lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.
Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Subscriber kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "Subscriber" also, put your mark on the packages so your wax can be recognized and mail the bill of lading, also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio.; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Mfg. Co., Falconer, N. Y.; Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE BEE-KEEPERS' REVIEW
NORTHSTAR - MICHIGAN

Pack your wax in double sacks. Use no paper or other packing.

TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can ..	\$2.25	\$2.15	\$20.00	
2 ½ lb. Can ..	2.75	2.60	24.00	
3 lb. Can ..	3.00	2.85	28.00	
5 lb. Pail \$5	4.75	4.50	42.50	
10 lb. Pail 7	6.50	6.25	50.00	

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	-	-	-	-	\$0.60 per case
24 cans in a case, 2 ½ lb. Cans	-	-	-	-	.71 per case
12 pails in a case, 5 lb. Pails	-	-	-	-	.65 per case
12 pails in a case, 6 lb. Pails	-	-	-	-	.70 per case
6 pails in a case, 10 lb. Pails	-	-	-	-	.49 per case
6 pails in a case, 1 lb. Pails	-	-	-	-	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1 ¾ INCH SCREW

1 in a case, price	-	-	-	-	-	-	.32 per case
2 in a case, price	-	-	-	-	-	-	.60 per case
2 in a case in lots of 250 cases, price	-					\$59.00 per 100 cases	
2 in a case in lots of 500 cases, price	-					\$58.50 per 100 cases	
50 in a crate, price	-	-	-	-	-	\$10.00 per crate	
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.							

ONE GALLON SQUARE SYRUP CAN, WITH 1 ¾ IN. SCREW CAP

6 in a wooden re-shipping case @	-	-	-	-	60c per case
10 in a wooden re-shipping case @	-	-	-	-	95c per case
50 in one large crate	-	-	-	-	\$3.50 per crate

Anything in the line of Tin containers can be furnished at corresponding prices.

One percent discount to National Members, cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

Address

The National Bee-Keepers' Association
NORTHSTAR, MICHIGAN

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The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.

The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a long-felt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in *Gleanings in Bee Culture*, an illustrated semi-monthly by the same authors.

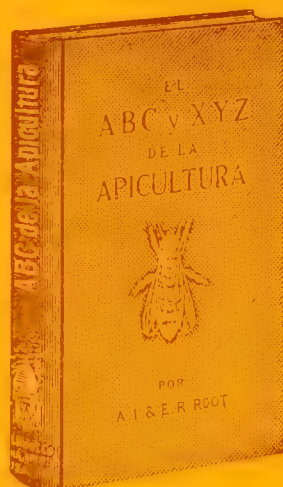
The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a wide-spread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



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MEDINA, OHIO, U.S.A.



The Beekeepers' Review

Published Monthly



MAR.

1915



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Hives and Shipping cases are
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Bee-Keepers'
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Perfect sections from young,
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Shipping Cases, Brood Frames,
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Guarantee:—All goods guaran-
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15th, send your name and get one.

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Carries a full line of our goods

AUG. LOTZ CO.
BOYD, WIS.

ISLAND BRED QUEENS

Did you ever lie awake nights thinking what a fine thing it would be to have your yard of bees isolated so far from neighbors, or wild bees that no mixing would occur? You could then breed queens from your very best stock and KNOW they would be mated with the very stock you wanted. Don't you see this would make it possible to select your breeding stock to suit yourself, breeding the queen from superior stock, the drones from others. The fact of the case, is, you would have this breeding proposition "under your thumb." The REVIEW has made arrangements with a firm who rear queens under identically the above condition, isolated on an island where there are no bees to interfere, and we will offer our readers queens from this stock during the coming season. This three-banded Italian stock is distinctly a honey gathering strain, and is direct from colonies that gave a surplus of 300 lbs. per colony, during a twenty-four day flow. This strain of pure Italians have been carefully bred up under these favorable circumstances for years, and without a doubt are much superior to any imported stock one can buy. Now it costs money to move a yard of bees to an island for the sole purpose of controlling the mating of queens, and it cannot be expected that these purely mated high grade queens can be sold at the price of ordinary stock. Although the firm who are breeding these queens for us have a thousand nuclei, or mating colonies, we look for a "scramble" after these superior queens this Spring and it behooves the party who expects to secure some of these queens to order early. Order NOW and have the queens mailed later, when you want them. We will begin mailing queens to our Southern trade the first of March, and the Northern trade as early thereafter as the weather will permit. If you want to save the trouble and risk of introducing your queens, they can be ordered in nuclei or with bees by the pound as you choose. Queens go by mail, post paid, and bees by express, not prepaid.

We quote prices as follows, shipped direct from our breeder in Florida:

Island Bred Italian Queens, shipments begin March 1st:

	1	6	12
Untested....	\$1.50	\$ 7.50	\$12.00
Tested.....	2.00	10.50	18.00
Sel Tested..	3.00	15.00	24.00
Tested Breeding Queens	\$5.00 and \$10.00 each		

Prices on Bees by the pound f. o. b. shipping point. Shipment begins May 10th:

	1	6	12
1/2 lb.....	\$1.50	\$ 7.50	\$12.00
1 lb.....	2.00	10.50	18.00
2 lbs.....	3.00	15.00	27.50
These prices are without Queens.			

Prices on Nucleus and Full Colonies without Queens: Shipping now.

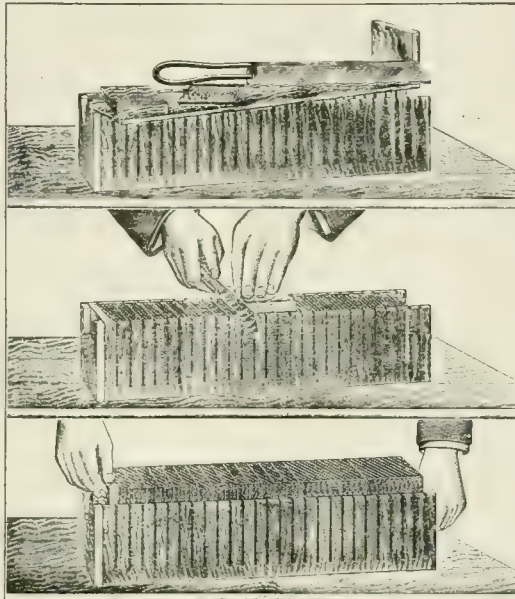
- 1 Frame Nucleus \$2.00; 2 Frame Nucleus \$3.00; 3 Frame Nucleus \$4.00
5 Frame Nucleus \$5.00; 8 Frame Colony \$7.50; 10 Frame Colony \$9.00.

Knowing this stock so thoroughly and the breeder being of National reputation, we do not hesitate to recommend this stock to be as good as money can buy, either imported or domestic. Remember we will book orders in rotation. First come, first served. By ordering now you will be quite sure of getting your queens when you want them. It is quite likely to be different, later. Order with remittance.

THE BEE-KEEPERS' REVIEW
NORTHSTAR, MICHIGAN

Rauchfuss Foundation Cutting Box

**A NEW
DEVICE EN-
ABLING YOU
TO CUT FORTY
SHEETS OF
SURPLUS
FOUNDATION
AT ONE TIME**



**MANUFAC-
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SIVELY BY
G.B. LEWIS CO.**
Can be purchased
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OR ONE OF
OUR DISTRI-
BUTERS
NAMED
BELOW**

The New Lewis Catalogue Has the Following New Articles Also:

THE COLD HANDLE BINGHAM HONEY KNIFE.
A NEW WOOD AND WIRE EXCLUDER.
THE WOODMAN SECTION FIXER
A BOX SEAT FOR BEEKEEPERS.
THE THALE FEEDER.
A SECTION HOLDER MAILING FORM.
A FRAME WEDGE—DRIVER.
A WOVEN WOOD AND WIRE TOOL CHEST.

IT IS NOW OUT—GET YOURS AT ONCE

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The following purchase from us in carlots for distribution in their territory.

CALIFORNIA.....	W. A. Trickey.....	Bishop
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COLORADO.....	Grand Junction Fruit Growers' Ass'n.....	Grand Junction
COLORADO.....	Delta County Fruit Growers' Association.....	Delta
COLORADO.....	Producers' Association.....	De Beque
COLORADO.....	A. S. Parson.....	Rocky Ford
COLORADO.....	Coffin & Foster.....	Rifle
COLORADO.....	J. Roscoe Miller.....	Montrose
GEORGIA.....	J. J. Wilder.....	Cordele
IDAHO.....	City Grain & Poultry Co.....	Nampa
ILLINOIS.....	Dadant & Sons.....	Hamilton
IOWA.....	Louis Hanssen's Sons.....	Davenport
IOWA.....	Adam A. Clarke.....	Le Mars
IOWA.....	H. J. Pfiffner.....	Emmetsburg
MICHIGAN.....	A. G. Woodman Co.....	Grand Rapids
NEW MEXICO.....	C. F. Reynolds.....	Artesia
NEW MEXICO.....	H. H. Brown.....	La Plata
NEVADA.....	H. Trickey.....	Reno
OHIO.....	Fred W. Muth Co.....	Cincinnati
OREGON.....	Chas. H. Lilly Co.....	Portland
TENNESSEE.....	Otto Schwill & Co.....	Memphis
TEXAS.....	Southwestern Bee Company.....	San Antonio
UTAH.....	Foulger & Sons.....	Ogden
WASHINGTON.....	Chas. H. Lilly Co.....	Seattle
PORTO RICO.....	Fritze, Lundt & Co. S.....	Ponce
ENGLAND.....	E. H. Taylor.....	Welwyn

G. B. LEWIS CO., Watertown, Wis.

The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION INC.

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo. PROF EDWIN G. BALDWIN, Deland, Fla.

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The new secretary of the National Bee-Keepers' Association is Wesley Foster, Boulder, Colorado, to whom all correspondence relative to the association should be addressed.

Read announcement on page 108 and mail your National annual dues of \$1.50 to Sec.-Treasurer, Wesley Foster, Boulder, Colorado.

The National Bee-Keepers' Association Inc.

The members of the National Bee-Keepers' Association are referred to memorandum No. 41, published in this number of the Review, relative to the incorporation of the National Bee-Keepers' Association. At this writing, no copy of the constitution as incorporated has reached this office, so no comment will be made at this time.

The winter, generally speaking, has thus far been mild, excepting a few very severe storms. Bees with a plenty of **Good** stores have wintered usually well out of doors. Some few adverse wintering reports have been received, both in cellar and outside wintering. Those could usually be traced direct to poor stores, especially those wintered outside in winter cases. Some poorly constructed winter repositories may be the cause of winter loss, but it can be taken for granted that the repository is very poor, indeed, if bees do not winter well, providing they have **good stores**. Those who were wise enough to extract their stores, or poor late winter stores and have fed their bees granulated sugar syrup last fall are fortunate, for they now have good strong swarms in place of very poor, or in many cases, dead swarms, where they are allowed to winter on aster honey.

During the warm spell the latter part of last month, the temperature in the cellar under my son's house where we are wintering some more than 200 swarms of bees began soaring toward 60 degrees F. and while the bees are wintering well upon sugar syrup, mostly, a few having white clover and basswood honey as stores, the high temperature caused them to get somewhat uneasy, and we carried out 50 of those nearer the cellar door, and they have had a very fine fly. As the cellar is crowded, those 50 swarms set out will not be carried back into the cellar, but, instead, will be papered with a tar paper, as shown in cut which we submit. It will be noticed that no packing will be used, as when they are packed up in the fall, the paper only being enough for the more mild spring month's.

As we have told you before, the light swarms from the different yards were grouped together and brought home and fed up and are being wintered in the cellar. Some unfortunate colonies were light in bees, as well as winter stores. Among the 50 colonies we mentioned above as being now upon their summer stands, four or five are of those that are weak in bees. Those light in bee colonies will not be risked upon the summer stands thus early, but will be put back into the cellar and left until the remainder are removed soon after the 20th of this month. If this moderate weather should continue, we may be compelled to remove more from the cellar, to be able to keep the bees quiet; for this is important.

Michigan has had a favorable winter thus far, Feb. 22nd for wintering bees outside in packing cases. A warm favorable winter for wintering outside, is usually unfavorable for repository wintering. It has been so with us this winter, although our bees in the cellar have wintered well thus far, they **could** have wintered better, had the temperature run lower and more even. As it was, the cellar varied all the way from 46 to 60 degrees F.

Notice we say packed, not wrapped in tar paper, for our bees are **packed** in about three inches of forest leaves, or clover chaff, something like a half being packed with each material mentioned. During the last five days bees have had a good clearing flight in this part of our state, so, barring

accident, will winter well, providing they are in good condition at this time. Our Wolf yard of 86 swarms were looked over last week and found in good condition, not a single dead swarm in the yard. Although some few unfortunates had lost rather heavy of bees, none were effected seriously in this respect. The experienced beekeeper can tell when bees have wintered well, or not, by the action of the bees. Poorly wintered bees are usually extended, and look abnormally large, and when they undertake to fly, some fail to take wing, their constitution being weakened. Others may be able to take wing, still being sick, the loss of vitality being such that they will "spring dwindle" and not be of much use, should the colony survive. Ours seem to have wintered so well that they are lightweight and "agile" there being no difficulty in their taking wing, almost as well as a summer fly. There will be no "spring dwindling" among such bees next spring.

We are going to stop here long enough to say that there is no such thing as "spring dwindling." To be sure, bees dwindle during the spring months, but it is invariably the results of **poor wintering**. To prevent "spring dwindling" winter your bees well. To winter your bees well, see that they have **good stores**. The method of putting them up for winter is of second importance. If your bees have not wintered well this winter, another fall your first consideration should be the stores they have for winter use, the method of packing, or the repository can be left as a second consideration.

I'm just a little off the subject, or, perhaps you had better consider this the main subject, it being of more importance. But to return: The Wolf yard is packed in three inches of forest leaves, held in place with tarred paper. This is for the sides of the hives, for there is six to eight inches of packing on top. At this yard each colony is packed singly, while at two of the other yards, the Welch and Stanton, two hives are set side by side and packed in pairs. This latter way is as we shall pack in the future, as a considerable more packing can be placed around and over the top with this method of procedure, with the same amount of material and labor.

Yesterday, Feb. 21st was a fine bee-day. With a bright sun and no wind to speak of and almost a summer

temperature, bees flew well. With our camera we made a trip to the Welch yard, where we found the bees in rather better shape than at the Wolf. If the picture turns out to be good, we may give you a glimpse of this yard in winter in the April number of the Review. This yard, like the Wolf, is packed in tarred paper, excepting that they are packed mostly in groups of two. They are packed in clover chaff, and so far as the packing is concerned, there is apparently no difference between this yard and the Wolf, where forest leaves are used. Here, too, the bees flew like summer, with apparently no exertion. The fact is they have wintered so perfectly that practically all their vitality is retained for spring work, so we will expect no so-called "spring dwindling" at this yard next spring.

In handling some colonies at the Welch, we had occasion to remove the chaff from above. In doing so we would run our hands down around the edges of the chaff above the hives, one on the south, the other on the north side of the packing. The black color of the tar paper seemed to draw so much sun rays, that the south hand felt the chaff very warm and comfortable, while that at the north side of the case felt cold. One can imagine that during sunny days in winter, even when it is too cold for bees to fly, that this sun's rays will warm up the colony to that extent that they can feed comfortably, which might not be the case with a less favorable colored packing case.

When bees have been confined two and a half months without a fly, as had our bees here this winter, no matter how good the winter stores, they will spot the snow some at their first flight. Usually, with our white clover and basswood honey as winter stores in this location, bees do not spot this up to any very great extent during winter flights. At the Welch yard one colony seemed to "smear" everything up near their hive. My son Dell, who stood by my side when this was discovered, remarked that it looked like some colonies wintered on the honey from the north, where some aster honey is stored. Sure enough, this yard was moved from our Charlevoix County location, where they secure considerable of this poor quality of honey, and it was decided that this particular colony had wintered, a part at least on some old

honey carried over from the previous season, consequently, dysentery was the result. Remember that **good stores** is the backbone of **good wintering**. Pay less attention to the repository and give more attention to the winter stores, would be my advice.

On page 53 of the February Review, referring to the National grading rules by picture, we are made to say that grade number two is grade number one and grade number one is grade number two, the half tones being transposed. Read number two at top and number one at bottom, of page referred to.

A Few Words from Denver

(Ex-secretary Williams came by way of Northstar on his trip to Denver to attend the National convention last month, and we requested him to mail us some few items from Denver in time for the March Review, and the following is his response:)

The annual meeting of the National Beekeeper's Association is a thing of the past. The new association that has sprung from the ashes of the old and thrown off its weaknesses and taken on the strong, etc., of a harmonious and united Brotherhood.

The attendance of delegates was especially large and the social attendance of Colorado and other Western states were very satisfactory. The papers and discussions were of a high order and were enthusiastically received.

The business department of the Association was satisfactorily arranged and will be conducted by an Affiliated association, leaving the National free and untrammelled by business entanglements, to devote its energies to the educational and scientific labors so much to be desired.

The attendance was of strong men. Representatives of this class was especially large. Some of the notables being present were Dr. Phillips of Washington, D. C. Prof. Jager, of Minnesota, Prof. Millen, of Michigan, Frank Pellett of Iowa, E. R. Root, Editor of *Gleanings in Bee Culture*, C. P. Dadant, Editor of the *American Bee Journal*, and dozens of other strong men were in attendance and assisted in shaping the policies adopted.

The Review will be continued and strengthened, as also, the selling of supplies will be continued and made more general, through an affiliated and closely connected association.

The National is not to be financially embarrassed by any responsibility on this matter. This is extremely important to all those desiring that the educational and scientific department be featured.

The membership fee is fixed at \$1.50 per annum, of which 50c is to go into the general fund, and \$1.00 to go into the subscription fund. While the dues are fixed at \$1.50 per annum, it is not obligatory for any member to subscribe for the Review, he may instruct the Secretary to devote the dollar to the promotion of lecture courses, etc.

It has now been two years since the National has had a cent of money in the treasury, from fees, and it is expected that its scope of usefulness will be greatly enlarged, by the addition of dues.

The new organization (incorporated association) received the entire membership of the old national, consequently, each member of every affiliated association is now a member of the new association. The provisions governing the relations of affiliated associations to the National were changed slightly. It became necessary now for each individual of the state association to belong to the National, before affiliation. This, however, does not affect the present status.

Some other minor changes were made in policy, but on the whole, wise counsel prevailed. Some difference of opinion was manifested, but the entire

proceedings were marked by earnest effort to clear the atmosphere of past differences, and make it possible to exert the entire strength of the membership to the solving of the big things before us.

The officers elected for the ensuing year are as follows: President, Dr. Burton N. Gates, Amherst, Mass., (re-elected); Vice President, Frank C. Pellett, Atlantic, Iowa (re-elected). Sec.-Treas. Wesley Foster, Boulder, Colorado.

The Directors elected for two years are as follows: E. D. Townsend, North Star, Mich., (re-elected); E. J. Baxter, Nauvoo, Ill. and J. H. Stoneman, Blackfoot, Ida.

The Colorado Honey Producers, both the state and local association, did the honors in the style peculiar to the big western men comprising them.

Taken as a whole, the association has taken a long step in advance, and merits the support of all who seek the welfare of beekeeping. Your retiring secretary wishes to thank the members for their loyal support and kind words during the last year.

I wish to add that in everything that has been done, I have been inspired by a sincere desire to promote the best interests of beekeeping, and not from any personal motive.

I feel that a great future is in store for the vocation. I am ready and willing to give any assistance to help in any way for the uplift of our business. With the best of wishes for the success of the National Bee-Keepers' Association, I remain very truly yours,

GEO. W. WILLIAMS

Management of 3000 Colonies of Bees in 50 Yards

By J. J. WILDER, Cordele, Ga.

Before we go into the fifth year's progress in the new field let me say that up to this time I did not have a branch of business solely equipped for extracted honey, only producing some that I needed along with the packing of my chunk honey, now and then offering a little to the trade in this form. My bee business was incomplete without honey in the extracted form. But long ago two locations

were picked out at which branches were to be established for the purpose of producing extracted honey. During the fourth year in the new field we placed a few colonies of bees at these locations to see what bees would do best there and the quality of the honey produced. We already had an idea what the results would be, judging from the honey resources there. Well, the test came up to all

expectations and now we come to the fifth year's work and let me say that these locations were about 40 miles apart, one on the great Suwannee River and the other on the Suwanoochie Creek, about midway between the home and Florida business, which made it very convenient to reach going or coming from my most remote location, which was about 200 miles from home branch, making the two new branches about 100 miles from home. We have very good railroad facilities.

The first thing we did was to erect at each place a cheaply constructed cottage for living quarters for the apiarists who were to take charge, and as soon as this was done they moved in, then erected a feed room, a stall for the horse, a wagon shelter; then a work shop and an extracting house was built, and then they were ready for the bees and at the same time my general foreman was at my Florida branches preparing 400 colonies of bees to be shipped, 200 to each new branch. These bees were taken from the largest apiaries and where it would be most suitable to make up the increase. As soon as ready the first car went, but no supers were carried as they were needed for the new increase to be made. Then, too, comb honey supers would not be needed at the new branch. As soon as the car reached its destination the man to take charge and his helper were ready with teams and soon the car was unloaded and the bees placed all in the yard there, from which they could be carried to the two outer locations, as soon as it was convenient. The general foreman who accompanied the bees went back on the next train for the next car, which was prepared and ready at the station, convenient to be loaded, and when loaded they went on to the other new branch, the first yard being turned over to the apiarist in charge. Then the foreman went home to get out the necessary supplies for the approaching season. Lumber was already on the ground and on file was on order from each managing apiarist for his needs in supplies. These orders were filled one at a time and sent out in a car so the material could be set up and gotten in readiness. The bees were moved the latter part of November, allowing ample time to get out the supplies and have them ready before they were needed. One car was ready for the Florida branch and

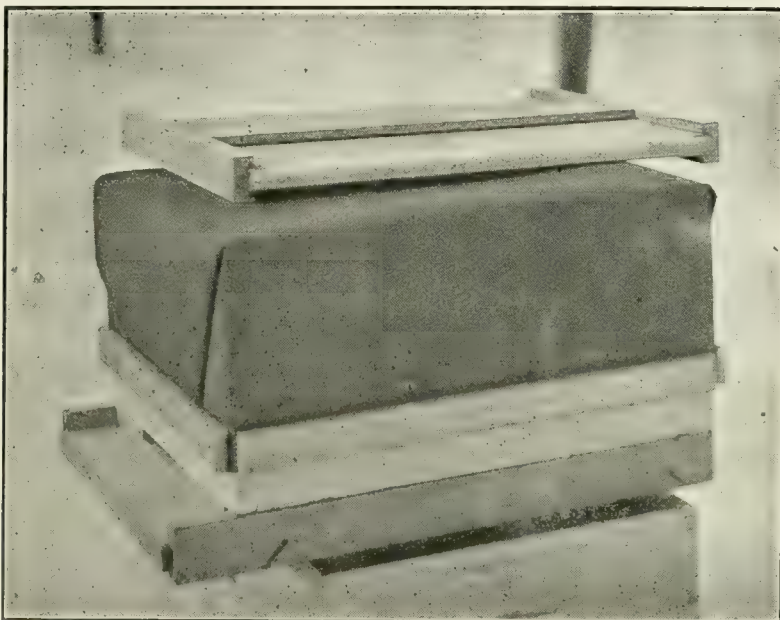
went out before the first of the year. It consisted of 400 one story hives and about 800 comb honey supers, together with a lot of foundation sections, etc., which would be needed to complete the equipment and supplies needed for the coming season. When the car arrived the apiarist in charge and his helper went to work on them. By February the first car was ready and went to one of the new branches. It consisted of 100 new story hives complete for increase and 900 shallow extracting supers, foundation and all necessary supplies, together with honey tank, extractor, and thirty-five 32-gallon barrels for the honey produced at that branch. These supplies were also set up in readiness. By February the 16th our general foreman had the other car about ready to go out, or he lacked just another day or so, when he was suddenly taken violently ill. The doctors were called in and they said there was no chance for him to live and I was notified at once and as soon as I received the message I left for home, for I was spending the winter at my winter cottage at Brodentown, Fla., and on reaching home I found my right hand man lying at the point of death and in a few hours he was dead. I instructed the best helper he had the best I could how to finish up the uncompleted job, and I took his body back to the little farm in the Red Hills of middle Georgia, from whence he came to me when only a boy, and there I laid his body in its last resting place and I returned home and took charge of the business. Well, our business was all in gloom; our right hand man and the one whom we had all learned to love was gone. All our men had been notified of his serious illness and the most of them were at his bed-side before I was and were there when he died.

Soon we had the other cars of supplies, containing the same material as the first one, in the hands of the other apiarist at the new branch. Well, we all got busy in dead earnest and by the time the supplies were fully ready and on the ground around at the yards the bees needed our attention and we went to them and the usual routine of work was followed, and the increase was all made in the usual manner during our second, third and fourth rounds, and built up ready for the approaching honey flow. Into this we went with all the vim we possessed and a harvest of over 200,000

pounds was made, which was our greatest mark reached.

When it comes to progress this was the greatest in the history of our business and only those who are thoroughly familiar with extensive bee-

keeping can fully realize how much was done. And only a hungry life for a great business can fully realize the joy and pleasure the writer had seeing such a venture carried out so well, every man doing his full duty.



This halftone shows our method of papering bees with tar paper for Spring Protection.

Out-of-Door Wintering of Bees

Read at the Michigan Affiliated Meeting of Beekeepers, Detroit, Mich.
December 10-11, 1915 by Ira D. Bartlett, East Jordan, Mich.

(Continued from the February Number)

But brothers, you must know where you are at. You can't guess and be successful—you must have system. It's easy, but you positively cannot continue in a careless manner any length of time and be successful. If we would all do what we know to be right, do it because it means success if we do it, and not take a chance on exceptionally favorable conditions, but have everything in preparation for a bumper crop—hives prepared for the unfavorable weather, an abundance of stores in the hive and plenty of warm packing for fear of a long cold winter—there would not be 90 per cent of failures that there actually are.

The success of any business is simple enough. It simply requires a keen, wide-awake person, who can figure out a system that is flexible enough to meet the various conditions that we are bound to bump up against. Any business is made up of little details, and the bee business is surely no exception. But every man or woman can't succeed in every undertaking; however, you can be successful in a measure—and that measure to which you are successful is dependant upon the systematic application of the rules that you know govern the success of that particular undertaking.

If you ask me what is the most important factor in beekeeping. I would surely say "System."

I thank you.

Sweet Clover for Bee Pasture

By E. E. BURTON, Falmouth, Ky.

A fine lot of bees of the best strains, with modern equipment of hives, and apparatus to handle the product, are of little value without a flow of nectar to provide a surplus of honey. Excepting in a few very favored localities, the blossoms of trees, shrubs and plants, both wild and cultivated, seldom furnish a dependable supply of nectar, and for many years beekeepers have resorted to sowing special crops for their bees. But with an increasing demand for farm products the land owner will hardly feel justified in devoting his fields to something that will afford bee pasture only, and if some crop can be grown that will be profitable to the farmer and at the same time produce a strong flow of nectar for good honey, then that is a crop much wanted.

There are three principal kinds of sweet clover growing in the United States, known as *Melilotus alba* or white blossom sweet clover, *Melilotus officinalis* or biennial yellow blossom, and *Melilotus indica*, an annual yellow blossom kind. The last named species is a small, dwarfish plant, and is not likely ever to be much utilized by farmers. This discussion will be limited to the first two species named, which are biennial plants making large growth of both tops and roots. In Northern Kentucky the biennial yellow begins blooming about the middle of May and continues to flower three to four weeks. The white sweet clover comes into bloom two or three weeks later and flowers four to five weeks, but has a habit of producing some flowers throughout the summer, even until frost when grazed. The flowering of either kind can be postponed until late in the summer or even in the fall by cutting the first crop for hay or by grazing the first growth.

The honey produced from sweet clover is clear and almost water white. It has a distinctive flavor that is very pleasing to most users of honey. The flow of nectar is abundant and is less affected by drought than in other plants, as sweet clover has a large root growth tapping the subsoil deeply for moisture. The yellow blossom sweet clover becomes available for

bee pasture about the close of the season of most plants flowering in the spring, such as wild flowers, fruits, little white clover, locust, etc., and following that the white sweet clover carries the pasture through the middle of the summer when there is little else for bees to work on.

Until recent years, beekeepers have done more to spread sweet clover than any others, but their activities were limited mostly to sowing it along roadsides, waste places, vacant lots, etc. When he undertook to tell the farmer of its usefulness, the latter suspicioned the motives of the beekeeper's good advices, and decided not to be "worked" for free bee pasture on his lands in any such fashion. But the seed sown by the "bee man" along the wayside worked into the ground, even on stony and hard ground, and a harvest of a hundred fold is being reaped by both the beekeeper and the farmer. The sweet clover grew up in its luxuriance, and the farmer watched his stock feeding upon it; he saw it had affected a change in the soil and became interested in the plant. Today, sweet clover is attracting more interest and is being discussed by farmers more than any other forage plant, excepting alfalfa.

Sweet clover stands out most prominently as a fertilizing crop. Being a legume it is capable of storing in its roots, stems and leaves large amounts of that valuable element of plant food, nitrogen, which it takes from the air, and enriches the ground for the benefit of future crops. Its adaptability to a great variety of soils and differences of climate makes it of general usefulness. The amount of humus produced is very large, and the thick, fleshy roots decay quickly, leaving the ground mellow and rich. In a few counties in Northern Kentucky the value of this plant was recognized early by the farmers, and utilized by them to restore washed and worn-out hill lands that had been badly abused. They sowed it broadcast on top of the ground in winter and early spring, on lands that were so rough and gullied as to prevent cultivation. The rains, freezes and thaws worked the seed into the ground



DR. BURTON N. GATES, Amherst, Mass., re-elected president of National at Denver February, 1915.

and saturated the coating over the germ so as to secure excellent germination early in the spring. By this means many thousand acres of abandoned lands were redeemed and the soil built up and enriched so as to yield their usual harvests of corn and tobacco.

During the process of regeneration the farmers occupying these poor lands were badly in need of forage for their stock, and set about to make further uses of sweet clover. They found it afforded abundant pasturage of high nutritive value, and was readily eaten by all kinds of stock. It furnishes more grazing than the best of blue grass pastures, comes very early in the spring and is the last green vestige in the pasture when the snow flies in the late autumn. These farmers next tried it for hay and with equal success. It was found to be as good hay as alfalfa if cut before growing large and coarse, and even the coarse stems are cleaned up by the stock.

When the value and usefulness of

sweet clover had thus been proven to the farmers of these northern Kentucky counties by their own experiences with it, they began sowing it more generally, and now it constitutes the principal pasturage, and produces a large part of the farm's hay crop. In one of these counties there are three creameries in successful operation furnishing milk and cream to the Cincinnati market from cows grazed on sweet clover in the summer and fed largely on sweet clover hay in winter. The price of land advanced rapidly on account of its improved condition and productiveness, and also on account of the practicability of using sweet clover on lands that had not yet felt the magic of this remarkable clover. Beekeepers took advantage of the changed conditions and built up their apiaries. Farmers engaged in beekeeping who had not been interested before and professional beekeepers moved into these counties from distant localities, each bringing with them hundreds of colonies of



FRANK C. PELLETT, Atlantic, Iowa. Re-elected vice president of the National at Denver, February, 1915.

bees.

This subject would not be complete without some discussion of methods of seeding sweet clover. The seed is slower to germinate than red clover, alfalfa, etc., and requires a longer time in the ground. On this account best results are obtained by sowing in winter and early spring. For late spring, summer and fall sowing the seed should be covered about half an inch deep. A firm seed bed is best, and the soil should be stirred only deep enough to cover the seed the required depth with a finely pulverized soil. When the ground has been cultivated deeper, it should be allowed to settle some before sowing. Sweet clover can be sown in winter and early spring on small grain, and on meadows and pastures without disturbing the stand already existing. It can be sown in the spring with oats and spring barley, covering the grain first, then sowing the clover and cover lightly; also in corn at last cultivation and on stubble land after grain harvest. In the fall it may be seeded with winter grain when early enough to make a root growth to stand the usual winters of the locality where sown. From ten to fifteen pounds of good seed are sown per acre, though a heavier seeding may be made for green manure crop to be plowed under after the first year's growth. The unhulled seed is free from adulterations or mixtures of cheaper kinds, and is generally preferred in those localities where sweet clover is grown most extensively.

Inoculation with the proper species of nitrogen-fixing bacteria is very beneficial in getting a start. This can be done with the soil method or with pure bacteria culture. Lime in the soil is favorable to the growth of legumes generally, but sweet clover thrives and produces successful crops on acid soils; also on wet soils that are not water-soaked.

There is a great field of usefulness for sweet clover in this country; so many acres of poor and idle lands, so many farms not producing what they are capable of under different systems of farming. Livestock, dairying and the growing of legumes such as sweet clover will do much to improve the soil's fertility and provide better for the increasing wants of our rapidly growing population. With sweet clover the interests of the beekeeper and farmer are united, and in a few years we will see this plant growing in

meadows and pastures everywhere. Lands that are now idle or infested with worthless weeds will soon be covered with a luxuriant growth of sweet clover, and the air will be filled with the fragrance of its flowers and the busy hum of our little worker friends.

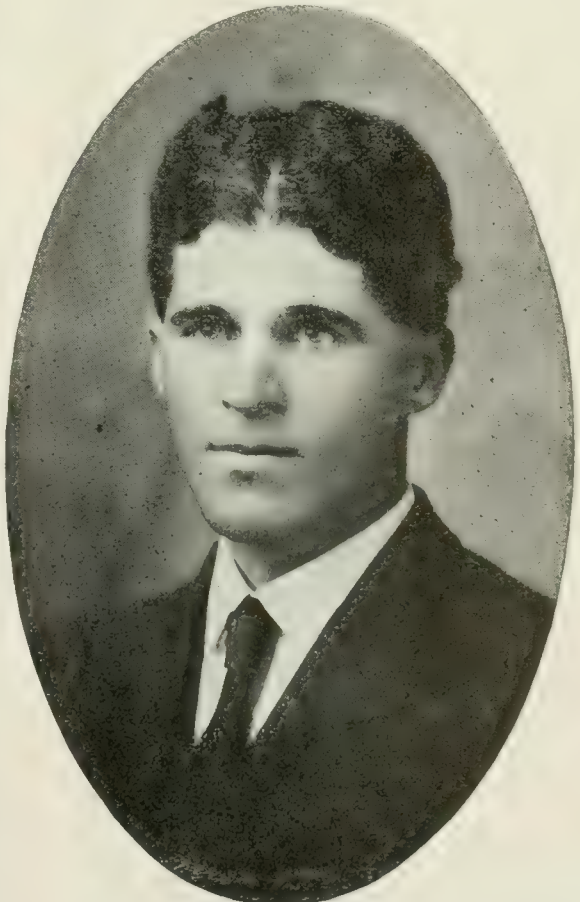
Water Treatment for Foul Brood

By F. R. McCOY

Member of Idaho Honey Producers' Association.

As soon as foul brood is discovered in any colony of ordinary strength, the diseased colony should at once be treated by placing in a tank with sufficient water as deep as the bottom board, tank to be perfectly level, and the water deep enough to keep the bees from escaping from the infected hive.

Take a clean hive, with full sheets of foundation, place a wire cloth upon the top of clean hive and place the clean hive upon the top of the diseased hive in such a manner that the



WESLEY FOSTER, Boulder, Colorado
Elected Sec-Treasurer of the National Beekeepers' Association at Denver, February 1915

bees can readily work up into the clean hive—putting weights on top of upper hive to keep the lower hive from floating.

Commence pouring water into the tank in a steady stream so that it will consume about twenty minutes for the water to get high enough to force all bees from the diseased bottom into the clean top. Continue the water until it is forced to the top of the lower hive.

Great care must be taken to not

pour in too much to raise the water above the joint of the lower and upper hive.

After this treatment has progressed this far, bees are absolutely clean and free from any disease. Then take the clean hive, have your bottom board ready on the same stand as you had the diseased stand, set your clean bees on top of the bottom board and your treatment is complete.

Take diseased colony or the old hive and destroy it totally by fire.

My First Season With Bees

E. M. RENNOLDS, Hansford, Florida

Editor Bee-Keepers' Review:

At the close of my first year's experience as a beekeeper I have been prevailed on to give your readers my impressions, experiences, failures and successes.

At the outset let me say that I kept bees for five months in movable frame hives nearly thirty years ago, which embraced all of my previous experience. The first thing I did was to get literature and find out how many honey flowing plants grew in my locality and finding five that the books said were good producers with possibly two others that were fairly dependable and the fact that these plants bloom singly I thought the venture worth making, but when I looked at the multitude of different sized hives listed what should I do? Which one should I buy?

I reasoned that in the north where the seasons are short and only three general sources which come in rapid succession a large hive would be a necessity because a full colony would do the work quickly, but in this semi-tropical climate where the seasons are longer perhaps a smaller hive would be better, so I bought the light frame Langstroth for the main apiary and added just a few ten frame as an experiment and am fully convinced from experience that the eight frame is large enough if not **too large for this locality**.

I started with four hives of Italians in eight frame hives and had twenty-four stands at the end of the season and sixty-two gallons of extracted honey.

I had several natural swarms, of course, but as I was working for in-

crease more than honey, I made divisions several times. My way of doing this was to watch for queen cells and whenever I found one that was not needed I took an empty hive with full sheets of foundation and went to a hive that was pretty strong in bees and brood and put practically two-thirds of bees and brood in the new hive and filled vacancies in old hive with foundation. I then put a ripe queen cell in a protector and introduced at once into whatever hive happened to be queenless, sometimes the old, sometimes the new colony, but was always careful to know which one the old queen was in. When I moved the new colony to a new stand at once, of course some of the bees went back to the old home, but the plan worked perfectly with me and experience proved that it was best to put the queen in the new colony and leave the cell in the old one.

Now, about hives. Should I buy or make them?

Having spent my life in carpentry and machinery I believe it will pay me to make them for several reasons which are as follows: First, it would give me employment during rainy days and idle time at a work which I thoroughly enjoy and am fully capable of doing right; second, I already had a good shop building with power installed and the only outlay was the actual machines and I made the greater part of them of junk left on my hands from the saw mill business, which I formerly followed, but let me say that I seriously doubt if it would pay the average beekeeper to make his hives. I have written these lines with the hope that some brother bee-

keeper who is just starting may find something that will be of benefit to him and am fully alive to the fact that I have left several gaps open for the professional beekeepers to jump on me with both feet, so let me say now that in my humble opinion there is no well beaten track that can be followed without variation, but it is a science which must be worked out according to locality, seasons and general surroundings, and the man that makes good is the man who does not depend on others for his knowledge, but "works out his own salvation" with his own hands and brain, to a reasonable degree, after

getting the fundamental principles from text books.

(Good for you, friend Rennolds! That is a fine showing for a beginner. We might add that your advice to the average beeman is NOT to try making his own hives, if he desires accuracy and science in the making of all fixtures. We, too, are now making our own hives with an electric power saw, and like it, and the results; but, may we add, we, too, have worked at the machine end of things, more or less, since boyhood and love the work, too. We can fully appreciate the feeling that Mr. Rennolds has about it all, for the same reason. Let us hear from you again.) E. G. B.

The Care of the Bees from April 1st to June 10th

By GEO. H. KIRKPATRICK, Rapid City, Mich.

It is possible to have a good flow of honey and yet secure no surplus.

How to have colonies strong in number at the opening of the harvest is well worthy of consideration.

Aside from food in abundance, warmth is the one great essential needed to promote safe, early breeding. An ordinary colony will generate sufficient heat to enable the bees to rear as much brood as they can attend to. The trouble is that so much of this heat is lost by radiation.

I remember the spring of 1907, May 26th we had eight inches of snow fall and the mercury down to 32° F. This was after two weeks of fine weather during which considerable honey and pollen had been gathered, and the combs filled with brood.

The cold weather lasted three days and how the weak colonies did suffer. Some of them lost half of their brood and a few died outright.

Had the bees been warmly packed the damage would have been small.

Another year there was a cool spell of weather in May, during which the mercury remained at about 35 degrees for nearly a week and some fair colonies actually starved, the bees being closely clustered upon their brood and unable, or unwilling, to leave it to bring honey into the cluster.

Numerous instances like the above have convinced me that it pays to protect bees after taking them from the cellar, allowing the bees to remain

protected until the beginning of the harvest. I once believed that it was better to leave the bees in the cellar until late. I now believe it's best to get them out early, into the open air, and protect the hives from the cold winds in a manner that will retain all the animal heat of the colony.

A little freshly gathered pollen, honey and water seems to act like a real charm, putting new life into the colony. This encourages brood rearing as nothing else will.

Spring Protection Need Not Be An Expensive Affair.

I believe it will pay and pay well to build clamps of a cheap grade of lumber. They can be constructed in sections so as to be set up and then at the beginning of the harvest taken down and stored away to be used another season. The apiarist should get the clamps ready and then select a moderate day to remove the bees from the cellar to the clamp.

It will be best to select a day too cool for bees to fly. On the evening previous to setting the bees out, open the cellar doors and windows. This will lower the temperature and the bees will cluster closely.

When removing the bees from the cellar close the entrance with a damp cloth well tucked in.

Soon after setting the bees into the clamps they should be carefully examined. I equalize the bees and their stores, knowing that all colonies are supplied with sufficient stores to last

until the opening of the main honey flow in June, which should be equivalent to three L frames of solid honey.

I then place over each colony a square of oil cloth or heavy felt paper and over this place the hive cover. Now fill the clamp with dry chaff around and over the hives. The cover to the clamp should be snow and rain proof.

I begin the season with the colony in a single story hive which has served them as winter quarters. As soon as this is nearly full of brood I lift one-half of the brood to the center of an added story above, filling vacancies at each side in each story with empty combs.

At this move I leave eight combs in the first story and seven in the second story. Within two or three weeks there will be danger of the swarming impulse, which I wish to head off before it develops. It is also warmer weather and we can safely practice more drastic measures.

From each colony that has its two stories full of brood and honey I set aside upon a temporary bottom board the second and first stories. I then place a newly prepared body con-

taining seven empty combs, and look for the queen in the two bodies that I have set aside. When found I hang the comb she is on in the newly prepared body, then place a queen excluder on and return the two bodies.

A honey crop lies in having a colony rich in stores for a period of six weeks previous to the main honey flow.

The bees seem to be able to take an inventory of the stock on hand and then govern their operations accordingly. With two or three good, solid combs of honey back next to the sides of the hives, the bees don't seem to hesitate to go ahead and rear brood. With hives warmly packed and supplied with abundance of sealed stores, all the stimulation needed until after first bloom is over is furnished.

I don't think liquid food should be fed to a colony before fruit bloom, only to take the place of sealed stores that we may not have. I believe in feeding a liquid food for stimulative purposes between the close of fruit bloom and the harvest, of white honey be that Clover, Raspberry, or Milkweed.

Advertising Honey

Dr. A. F. BONNEY, Buck Grove, Iowa

January 28, 1915. adopt early and energetic measures
Editor the Bee-Keepers' Review: to insure a large consumption of

I am just now in receipt of a copy of a circular from our Secretary-Treasurer, as follows:

My Dear Sir:

Please signify whether or not you endorse the following policies, and return to me by return mail.

Geo. W. Williams, Redkey, Ind.

Whereas: The present war having closed the markets of Europe to the large quantities of honey formerly shipped there from California, Cuba, Canada and the West Indies, and this honey will come in competition with ours, in our already congested markets, and as the United States bids fair to increase her own production quite largely in the near future, and,

Whereas: A period of demoralized prices and congested markets confronts the American Beekeepers,

There, Be It Resolved: That the National Bee-Keepers' Association intrust and empower its directors to

honey; that they encourage distributing, selling, and advertising policies to the extent of their available resources, and financial ability.

.....member ofAssn.

About ninety-seven men out of every hundred will sign any petition placed before them, and also will put their names to an "endorsement" like this, without thought or study, and while this circular may be one of the brightest ideas in the world, it does not appeal to me, from a business standpoint, especially the advertising part of it, for the beekeepers of the United States cannot go into an advertising campaign—they have not the funds nor can they be raised—any more than they can liquidate the indebtedness against the Review. They will not.

The writer of this circular shows the weakness of this appeal when he writes "in our already congested mar-

kets." Our supply in 1914 greatly exceeded the demand, and I do not believe any amount of advertising we can do will sell enough honey to justify us in paying out a cent a pound to advertise.

I have not the space here to teach the beekeepers of the country to advertise. I have had experience, and tell you plainly that any idea of National advertising is a phantom. A million dollars may be spent for honey advertising and it will meet the fate of all advertising. Succeed or fail, and there is not a man alive who can tell which. To succeed in advertising one must have something new, something desirable, something people will want. Honey is not new, not by 10,000 years. However desirable honey may be part of the time not one person in a hundred wants it all the time. There are six of us in my family, and two, no three, attachments. That makes nine, and I do not think we will use 100 pounds of honey a year, and I should know, for I supply it, for cash, kisses and thanks. All the advertising one might do, even up to \$50 a year per individual, in this bunch of nine would not double the consumption of honey. 100 pounds. \$12 at my prices. For extracted. Would it pay?

As far as the use of honey in cooking is concerned, women will not use it at 10 cents a pound when sugar costs much less. As a medicine honey has no reputation.

It is not only the war's effect in shutting off exportation of honey that hurts, but home consumption has fallen off, in many communities. I notice it here, but I sell, and have a neighbor to compete with who sells two 60-pound cans for \$10, \$5 each, and claims "my" territory because he, eighteen years ago, lived near here.

I am in favor of "encouraging distribution and selling." while not in favor of the National putting a single dollar into advertising of any kind.

It is the business of the INDIVIDUAL to advertise HIS OWN BUSINESS. Tobacco raisers, cotton producers, farmers do not advertise, so far as I know of. Nobody is going to advertise the Bonney Drug Store. I have to do that myself, and I do it, but I know better than to spend much money in vaunting a drug store in a small rural community.

I modestly call your attention to a pretty good ad I gave the beekeepers of the world, the little red sticker, EAT HONEY. Now I'll add to it. Let everyone who has signed this "endorsement" apologize and at once spend a few dollars on envelopes as follows:

If Not Delivered in 5 Days Return to

EAT HONEY

Name of Producer
Name of Town

Let the upper line be 8 point type, the man's name and his town about ten point, and the EAT HONEY in a condensed block letter 30 points high. Print this in a brilliant red, the rest in black.

If a man does not use many letters, let him have stickers made and put up all over his territory. He can do this. The National CANNOT.

This circular is a thinly disguised attempt to involve the National Bee-Keepers' Association in an advertising campaign. "Therefore be it resolved: That the National Bee-Keepers' Association intrust and empower its directors to adopt early and energetic measures to insure a large consumption of honey; that they encourage distribution, selling and advertising policies to the extent of their available resources and financial ability."

We, as an association, have no "available resources," no "financial ability."

Parkville, Mo., Jan. 8, 1915.

Bee-Keepers' Review,

North Star, Michigan.

Dear Sir:—

We had a good meeting at St. Joseph, December 7-8, 1914. The presence of Inspector Frank C. Pellett, of Iowa, Dr. L. Haseman, State Entomologist, Dr. Godfrey Bohrer and Secretary O. A. Keene, of Kansas,

and W. M. Jennings of Franklin, Indiana, gave us a sense of neighborly satisfaction; and their contributions to the discussions were valuable. Through the courtesy of the Commerce Club of St. Joseph the Association met in the rooms of the Club in the Corby-Forsee Building. Dadant and Sons, of Hamilton, Ill., and the Leahy Mfg. Co., of Higginsville, Mo., exhibited their products.

The main features of business were: first ordering the Association to incorporate under the name of The Missouri Apicultural Society; second, ordering the preparation and introduction to the legislature of an adequate inspection law. By the time this reaches you the incorporation will probably have been effected. The inspection law has been carefully drafted by an able attorney and is in the hands of friends at Jefferson City. I enclose copy. Thus two important steps in advance have been taken by the promoters of the honey and bee industry in this state.

The value of bees to orchards was made the subject of addresses by Dr. L. Haseman and Dr. C. R. Woodson, the latter owning and operating one of the largest commercial orchards in the state. A. V. Small, of St. Joseph, read an admirable paper on "Shook-Swarming." Inspector Pellett, of Iowa, and N. M. Jennings, of Indiana, gave the results of their experience in Preparing Bees for Winter. "Rearing Good Queens" was the subject of a paper by J. F. Archdekin, of St. Joseph, an enterprising and enthusiastic breeder of queens. "Increase," "Management During Honey Flow," and "Disposing of the Crop" were the themes respectively of Dr. G. Bohrer, Chase, Kansas, L. E. Altwein, St. Joseph, and State Inspector M. E. Darby, of Springfield. An interesting paper by O. S. Mullins, of Holton, Kansas, on "Carniolans" drew favorable and approving comment

from those present who had experimented with these quiet but active fellows.

The effects of the meeting were immediate encouragement and stimulus. The St. Joseph beekeepers made a bid for a Field Meet this summer and are working for it already. Incorporation and the passage of the proposed bill will put beekeeping on a much better basis than ever. Officers elected for the Missouri Apicultural Society were:

President, J. W. Rouse, Mexico.

Vice-President, W. F. Cox, Garden City.

Secretary, Austin D. Wolfe, Parkville.

Treasurer, J. F. Diemer, Liberty.

Although last year was very poor as a honey producer, and though the wish may be father to the thought, it is generally expected that there will be a good honey flow in 1915. We have had an early spell of cold weather, which has retarded fruit bloom; it has been noticed that the linden (basswood) yields much more abundantly after a cold than a warm winter; and the pastures which were burned out two years ago have again become well set with white clover. In addition to these the stand of wild sweet clover increases year by year. So we have hopes.

Wishing you a prosperous and happy year, I am,

Very truly yours,

AUSTIN D. WOLFE,

Sec'y Missouri Apicultural Society.

Making Hives

ADRAIN GETAZ, Knoxville, Tenn.

Did the readers of this paper, that is, those who are beekeepers, ever realize that they are paying the supply dealers and manufacturers an extravagant price for their hives? Take a catalog and figure out the amount of lumber necessary to make the hive bodies, covers, etc. Compare with the prices and you will discover that we are paying them at the rate of something over one hundred dollars per thousand feet, lumber measure, to which the freight has to be added. And that for hives in the flat, which means merely the necessary pieces cut of the proper size. We have to make the hives ourselves, after all.

In the first place, the dovetailing

can just as well be dispensed with. Then, any kind of common lumber will answer the purpose as well as the more costly grades. We can get the necessary pieces cut of the proper size, ready to nail together, for 30 to 50 dollars per thousand anywhere in the United States. The box and crate factories are better equipped for that kind of work than the saw mills and the sash and door factories. Needless to say that we would have to furnish them a correct list of the number and sizes of the pieces wanted.

There is a cheaper way yet. It is to get long boards ripped to the proper widths and cut them across to the

right lengths by hand. That will look strange to the uninitiated, but it is so. In the woodworking shops, it takes nearly as much time to cut across a board 6 or 8 inches wide as it takes to rip lengthwise one 10 or 12 feet long. By hand it is the reverse. Ripping a plank is entirely out of the question while cutting it across can be done nearly as quickly and much cheaper than by machinery. Here in East Tennessee, I can get the planks dressed one side and of the widths wanted for 20 to 22 dollars per thousand feet. Out of them the pieces necessary for a hive body, cover, bottom and one super can be cut by hand in half an hour. I get the pieces needed for one-fifth or one-fourth the price that I would have to pay the

The Hoffman frames cannot be made at home. They are not the best kind, notwithstanding the claims of the parties interested in their sale. I use what is called in Europe the impropolisable frame. It is made of four plain pieces with nails at the ends of the top bar. These nails rest on strips of iron. Small notches cut in the strips hold the frames in place, but do not prevent the apiarist from placing the frames farther apart or closer together if he chooses to do so. Thus the advantages of both kinds, the Hoffman and the plain frames, are secured. As the only places where the bees can put propolis are where the nails rest on the strips of iron, and there is but little room there, these frames are more easily handled than any other kind.

They can be made very cheaply. Secure from the wood working shops long strips of the proper widths and thickness and cut them of the right lengths, a handful at a time, in a mitre box. They can be made from scraps and need not be dressed, mere-

ly ripped.

The best way is for the apiarist to use a gasoline engine power saw and do his own sawing. I have used a home made foot power saw successfully, but it is rather hard work and comparatively slow. At the present prices, I would advise the use of a gasoline engine. A foot power saw with a suitable pulley attached can be run with a small engine and do the work as well as can be desired. In this way the apiarist can use any kind of lumber, old boxes, etc., and make cheaply not only his bee-hives, but all the boxes, crates, etc., that he may need. And if he is also a farmer, which is often the case, he will find lots of repairs and new things to do: gates, troughs, tables, etc. Besides that, the engine can also be used for cutting feed, churning and many other purposes.

With his own saw, the apiarist can cut small pieces quickly and accurately. Among other things, he can make the separators or "fences" for the supers of his bee hives.

They can be made of one wide piece instead of four strips. The manufacturers make them with strips because it enables them to use their smallest scraps. Instead of grooved posts at the ends of the frames, it is easier to put two pieces, one at each side, as shown in the figure.

I presume that the Review readers know already that I am making my own foundation with a Rietsche press. It may interest some of them to know that this summer I have used brood combs made of about one-third or a little over of paraffine and two-thirds wax. The combs made with that mixture are as good in every respect as those of pure wax. Next summer I will try a larger percentage of paraffine.

Inheritance in the Honey Bee

By WILMON NEWELL, College Station, Texas

More or less time has been devoted by the writer, during the past four years, to a study of inheritance in the honey bee, as a project under the Adams Fund. Innumerable obstacles to the progress of this investigation have accumulated to justify the announcement of a few interesting

points.

The matings have been made, for the most part, at an isolated mating station on the Gulf Coast prairie, about forty miles northwest of Houston, Texas. The location of the station is almost ideal for this purpose, for there are no trees or shrubs affording

shelter for bees and no bees occur except those purposely taken to the mating station.

The matings thus far have been confined to crosses between the Italian and Carniolan races. As is well known, the pure bees of the former race are distinctly yellow, while those of the latter are more or less gray, but always, when pure, devoid of yellow color. For the primary crosses stocks were selected which had been under observation for several generations without having shown any indication of impurity.

Pure Italian queens mated to Carniolan drones produce workers and queens which are indistinguishable, so far as color is concerned, from the parent Italian stock: that is, in the F_1 generation of this, the "primary" cross, the yellow color is completely dominant. In the reciprocal cross, in which Carniolan queens are mated to Italian drones, the yellow color is also dominant, but not as completely so as in the primary cross: the F_1 queens and workers show nearly, but not quite, as much yellow color as the parent Italian stock. The significance of this in practical bee-breeding is at once apparent. For years professional queen-breeders have assumed that if an Italian queen throws workers which show the typical Italian coloring it is *prima facie* evidence that she has been purely mated. From the above results it is evident that such is not necessarily the case, for such a queen might have mated to either an Italian or Carniolan drone (or even presumably, to a black drone), and in either case her workers would have the typical Italian color. The purity of an Italian queen's mating therefore cannot be determined by an examination of her workers. Further reference to this is made below. The production of yellow workers by a pure Carniolan queen, on the other hand, immediately stamps her as having been impurely mated.

There is also excellent evidence as to the inheritance of characteristics other than color. For example, the marked proclivity of the Carniolans to use wax instead of propolis for sealing crevices, fastening frames together, attaching hive-covers to frames, etc., comes dominantly to the surface in the F_1 generation of the primary cross. In the F_1 generation of the reciprocal cross this trait is also much more in evidence than in the pure Italian race, though not as

completely dominant as in the case of the primary cross.

It seems to be a well-established law of heredity that an individual always produces gametes of the same kind as those of which it is itself composed. With this law the queen-bee appears to comply without exception. As the drone is produced parthenogenetically he is essentially a gamete and behaves as such in inheritance, at least so far as the color factor is concerned. Pure Italian queens mated to Carniolan drones produce only Italian drones; and Carniolan queens mated to Italian drones produce only Carniolan drones. This is strictly in accordance with the theory of Dzierson. However, the daughters of Italian queens which have mated to Carniolan drones produce both Italian and Carniolan drones, produce them in equal numbers, and do not produce any other kind. The F_1 queens of the reciprocal cross likewise produce drones of these two kinds and in equal numbers. This is in accordance with the theoretical expectation under Mendelian law. If the constitution of a pure Italian queen be represented by II and of a pure Carniolan queen by CC, the former will produce gametes I and I, and the latter, gametes C and C, these being Italian and Carniolan drones, respectively. A hybrid queen, however, has the constitution IC and produces gametes I and C in equal numbers, these of course materializing as Italian and Carniolan drones. The practical application of this is that the only test of an Italian queen's mating is found in the color of the drones produced by her daughters.

Another interesting consideration is that the production of an F_1 drone seems to be an impossibility and this, in turn, makes the production of a strict F_2 generation look like another impossibility. Beekeepers will at once argue that drones intermediate in color occur in nature, and such is the case. However, drones from purely mated queens are known to vary widely in color and this may possibly explain the occurrence of intermediate coloring. We are still in ignorance regarding the causes of this variation, and it is hoped that further data from the mating-station will throw more light on this as well as on other phases of this interesting problem.—*Science*, Feb. 5, 1915.

Are you a REVIEW SUBSCRIBER?

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.....East Jordan, Mich.
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.....E. J. Winder, Vernal, Utah.
WASHINGTON—S. King Clover, R. No.
1, Mabton, Wash.
WISCONSIN—Gus Dittmer....
.....Angusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

Beekeeping vs. Spraying in Bloom

An Effort in Massachusetts to Re-
lieve the Alleged tax on
Beekeepers.

The Massachusetts Board of Agri-
culture will shortly issue a poster in-
dicating the proper time for spraying
fruit trees and showing that while
trees are in bloom it is not only in-
effective as a prevention against fruit
pests, but directly dangerous in some
cases, being liable to spoil the blos-
soms and to cause the death of bees;
thereby greatly reducing the amount
of fruit set. It is hoped to have ready
shortly thereafter, for general distri-
bution, a more extended circular or
bulletin on this subject. The poster
is intended for use in public places.
Both poster and circular can be ob-
tained as soon as issued, by address-
ing the Honorable Secretary of the
State Board of Agriculture, 136 State
House, Boston, Mass.

E. D. Townsend
J. M. Buchanan
W. Foster
G. W. Williams
E. G. Carr

National Bee-Keepers' Association,
Amherst, Mass., February 9, 1915.
MEMORANDUM NO. 40.

To the Board of Directors:

MEMORANDUM No. 33 was duly
presented to the Directors and there-
to attached was a statement concern-
ing a measure whereby funds could
be obtained for advertising of honey.
This proposal has met with some fa-
vor both by Directors and others. It
is not considered, however, by your
Chairman as sufficiently desired by
the beekeepers and others to admit
further consideration. The proposal
is therefore withdrawn without fur-
ther report.

BURTON N. GATES,
Chairman Board of Directors.

Mr. E. D. Townsend
Mr. J. M. Buchanan
Mr. W. Foster
Mr. G. W. Williams
Mr. E. G. Carr

National Bee-Keepers' Association,
Amherst, Mass., February 11, 1915.

MEMORANDUM NO. 41.

To the Board of Directors:

The National Bee-Keepers' Association,
Incorporated.

The Chairman is pleased to report
that on this date he has received from
the Secretary of State of Illinois,
Lewis G. Stevenson, a certificate of
incorporation, of the National Bee-
Keepers' Association, dated January
15, 1915, application having been filed
under date of January 14. "Now,
therefore, I, Lewis G. Stevenson, do

hereby certify that the said National
Bee-Keepers' Association is a legally
organized corporation under the laws
of this State." Signed and sealed.

The National Bee-Keepers' Associa-
tion, incorporated, is agreeably to its
charter, an association not for pec-
uniary profit. This, therefore, com-
plies with the instructions of the Del-
egates in their vote of thirty-two to
one against, sustaining the motion of
Mr. Moore "that the National Bee-
Keepers' Association incorporate as
a fraternal and educational associa-
tion....."

Total charges for legal service and
fee for recording, \$20.60. These ex-
penses have been borne by your
Chairman, subject to your approval
for payment.

BURTON N. GATES,
Chairman Board of Directors.

*Financial Report of the Bee-Keepers' Review for the
Fiscal Year Ending January 31st, 1915*

**Warrants Drawn on General Fund
1914-1915**

181 Izor Printing Co.....	\$ 8 72
191 Chas. F. May Co.....	118 00
192 N. B. Rund.....	1 00
193 Marion Guertin.....	3 25
194 N. B. Gates.....	85
195 Detroit Photo Engraving Co.	1 50
196 American Bee Journal.....	5 95
197 The Beekeepers' Review.....	15 34
198 E. D. Townsend.....	129 44
199 E. D. Townsend.....	133 70
200 Envelope Sales Co.....	18 04
201 Chas. F. May Co.....	142 00
202 Leuth & Schneider.....	50
203 The Beekeepers' Review.....	23 20
204 Detroit Photo Engraving Co..	7 70
205 Michigan Electric Co.....	9 15
206 Chas. Lee.....	7 00
207 S. L. Townsend.....	4 00
208 S. L. Townsend.....	30 00
209 The Beekeepers' Review.....	33 55
210 Chas. F. May Co.....	126 00
211 Underwood Typewriter Co....	1 50
212 Izor Printing Co.....	7 58
213 Remington Typewriter Co....	3 70
214 Velma Perdue.....	2 55
215 Detroit Photo Engraving Co.	9 25
216 American Bee Journal.....	7 80
217 Gratiot County Herald.....	139 93
218 S. L. Townsend.....	11 00
219 The Beekeepers' Review.....	22 57
220 The Beekeepers' Review.....	13 63
221 Velma Perdue.....	1 65
222 S. L. Townsend.....	10 00
223 American Bee Journal.....	3 00
224 Gratiot County Herald.....	106 70
225 Detroit Photo Engraving Co.	5 60
226 Chas. Lee.....	7 00
227 Izor Printing Co.....	1 57
228 The Beekeepers' Review.....	7 50
229 Michigan Electro Co.....	3 70
230 Gratiot County Herald.....	123 41
231 Detroit Photo Engraving Co.	8 95
232 American Bee Journal.....	5 55
233 Envelope Sales Co.....	14 85

234 S. L. Townsend.....	10 00
235 The Beekeepers' Review..	6 00
236 The Beekeeper's Review....	25 04
237 Velma Perdue.....	2 00
238 L. Hawkins.....	1 00
239 S. L. Townsend.....	10 00
240 The Beekeepers' Review..	8 39
241 The Beekeepers' Review..	2 09
242 Detroit Photo Engraving Co.	11 00
243 Gratiot County Herald.....	122 67
244 Izor Printing Co.....	6 30
245 Gratiot County Herald.....	122 67
246 Detroit Photo Engraving Co.	9 25
247 American Bee Journal.....	10 95
248 The Beekeepers' Review.....	1 75
249 S. L. Townsend.....	10 00
250 The Beekeepers' Review.....	17 52
251 The Beekeepers' Review.....	7 00
252 B. N. Gates.....	1 00
253 Gratiot County Herald.....	122 67
254 Redkey Times.....	7 00
255 The Beekeepers' Review.....	2 06
256 The Beekeepers' Review.....	1 50
257 The Beekeepers' Review.....	10 00
258 The Beekeepers' Review.....	2 00
259 Detroit Photo Engravers.....	4 50
260 The Beekeepers' Review.....	14 23
261 The Beekeepers' Review.....	10 50
262 J. A. Pearce.....	4 50
263 The Beekeepers' Review.....	4 00
264 George W. Williams.....	6 95
265 S. L. Townsend.....	12 75
266 Detroit Photo Engraving Co.	3 70
267 The Beekeepers' Review.....	1 85
268 The Beekeeper's Review.....	19 79
269 The Beekeepers' Review.....	122 67
270 The Gratiot County Herald..	122 67
271 E. B. Tyrrell.....	42 00
272 E. B. Tyrrell, Review debt fund	
273 The Beekeepers' Review.....	19 80
274 Izor Printing Co.....	12 38
275 The Beekeepers' Review.....	8 75
276 Detroit Photo Engraving Co.	75
277 Gratiot County Herald.....	107 34
278 The Beekeeper's Review.....	10 00
279 Velma Perdue.....	1 50
280 Charles Lee.....	12 00
281 The Beekeepers' Review.....	2 00

282 The Beekeepers' Review.....	12 17
283 The Beekeepers' Review.....	23 41
284 The Beekeepers' Review.....	4 00
285 Detroit Photo Engraving Co.	15 76
286 Amherst Record.....	4 41
287 Izor Printing Co.....	1 24
288 Redkey Times.....	4 00
289 The Beekeepers' Review.....	2 50
290 S. L. Townsend.....	10 00
291 E. D. Townsend.....	300 00

Total.....\$2788 86

RECEIPTS AND DISBURSEMENTS FOR FISCAL YEAR 1914-1915

Cash on hand February 9th, 1914.....	\$ 82 93
February Receipts.....	308 32
March Receipts.....	324 30
April Receipts.....	175 20
May Receipts.....	177 42
June Receipts.....	155 59
July Receipts.....	202 76
August Receipts.....	262 62
September Receipts.....	85 23
October Receipts.....	163 61
November Receipts.....	125 50
December Receipts.....	431 76
January Receipts.....	312 25
	\$2807 49

DISBURSEMENTS

Printing.....	\$1531 99
Postage.....	243 49
Editor's Commission.....	563 14
Engraving and Photos.....	92 31
Office Help.....	149 30
Office supplies.....	11 09
Advertising.....	33 25

Review Mailing Envelopes.....	52 69
Office Rent.....	43 50
Freight and Express.....	4 60
Treasurer Bond.....	7 50
Draying Review from Printers.....	14 00
Interest on Review debt.....	42 00
Balance.....	\$2788 86
Derived from the following sources:	\$ 18 63
Subscription.....	\$1454 58
Advertising.....	889 27
Commissions.....	380 71
	\$2724 56

THE REVIEW DEBT SUBSCRIPTION LIST

Amount rec'd to date \$222 35	
Warrant 272 E. B. Tyrrell.....	\$200 00
	22 35

SUPPLIES FURNISHED NATIONAL MEMBERS DURING FISCAL YEAR ENDING JANUARY 31st, 1915

February Sales.....	\$ 298 76
March Sales.....	277 66
April Sales.....	352 68
May Sales.....	1530 59
June Sales.....	1619 27
July Sales.....	1227 90
August Sales.....	528 44
September Sales.....	325 50
October Sales.....	133 15
November Sales.....	232 78
December Sales.....	338 10
January Sales.....	175 98
	\$7090 81

Two carloads of Tin Containers were handled upon 2½ per cent commission. The entire sales being handled upon a trifle more than 5 per cent commission.

Beekeepers' Convention and Official Apiary Inspectors' Conference

Massachusetts Agricultural College, Farmers' Week, March 15, 16, 17, Section 7

Those desiring programs or information, please address the Extension Service of the Massachusetts Agricultural College, Amherst.

MONDAY, MARCH 15

Entomology Building, Room D

1:30 P. M.—"Honey Production for Massachusetts," Demonstrations. Dr. Burton N. Gates, M. A. C.

2:30 P. M.—(Subject to be announced), George B. Howe, Black River, N. Y.

3:30 P. M.—"Swarm Control Measures as Practiced in Michigan," Rev. D. D. Gorton, West Springfield, Mass.

M. A. C. Chapel

4:30 P. M.—Beekeepers' Special Moving Picture program.

TUESDAY, MARCH 16

Entomology Building

9:10 A. M.—"Massachusetts Wax Rendering Service," Dr. Gates.

Demonstration of wax rendering. Wax Rendering Laboratory, Dr. Gates, J. L. Byard.

10:10 A. M.—Meeting of the Hampshire, Hampden, Franklin Beekeepers' Association, Pres. W. M. Purrington, presiding.

Annual reports, transaction of regular business. Election of officers.

11:10 A. M.—"Developing a Race of Bees for Efficiency," Geo. B. Howe, Black River, N. Y.

Mr. Howe has spent years in improving his race of bees.

1:30 P. M.—"Beekeeping in East Africa," C. C. Gowdey, Government Entomologist, Uganda, East Africa.

2:30 P. M.—"Orchard Spraying Practices with Relation to Beekeeping," Dr. M. T. Fernald, M. A. C.

3:00 P. M.—"A Procedure for Late Fall Queen Mating," J. L. Byard, M. A. C.

3:30 P. M.—"Experience in a New York State Commercial Bee Yard" G. H. Cale, M. A. C.

Bee House

4:00 P. M.—Visit to apiary for demonstrations and manipulations. It is probable the New Friction Drive Honey Extractor will have been installed.

WEDNESDAY, MARCH 17

Apiary Inspectors' Convention, Auspices of State Board of Agriculture, Hon. Wilfred Wheeler, Secretary, presiding.

This is the second Convention of Apiary Inspectors of Eastern United States. The program will be open to all interested, with a session for official inspectors.

The speakers will be selected from the inspectors and authorities who may attend. A special program will be distributed at the meeting.

See also announcements in the Beekeeping press.

The subjects proposed comprise:
Methods and Duties of Inspectors.
Combatting European Foul Brood.
Methods of Control and Suppression.
Combatting American Foul Brood.

Combatting other Bee Diseases or Maladies.

Transportation Problems vs. the Spread of Infectious Bee Diseases. Resistance of Race, Variety or Strain of Bees in European Foul Brood Suppression.

This is a very preliminary announcement. For details, information or suggestions of subject to be considered, address Dr. B. N. Gates, Amherst, Mass. The subject of spraying in relation to beekeeping will doubtless come up for consideration, being closely associated with apiary inspection work.

Special Features

General Exhibits, beehives, implements honey packages, etc. Exhibition room throughout week: Entomology Building.

Special Exhibit of beeswax; working products, grades, types. Throughout week: Wax Laboratory, Entomology Building.

Meeting of Hampshire, Hampden, Franklin Beekeepers' Association. Tuesday, Entomology Building, 10:10 a. m.

Apiary Inspectors' Convention (Wednesday), 9:10 A. M. Room K, Entomology Building.

Auspices of State Board of Agriculture. Beekeepers' Special moving picture program, M. A. C. Chapel, 4:30 P. M., Monday.

Report of the Indiana State Convention

(Continued from December Number)

C. H. Baldwin gave a brief resume on the inspection work done the last year. Indiana has one of the best laws of almost any state, and our able inspectors handle the disease very successfully.

The Tuesday session was opened by C. P. Dadant's masterly paper on "The History of Beekeeping." It is

not necessary to say that the subject was ably handled. His treatment was characteristic of the able man who has modestly and quietly aided in giving American beekeeping the standing it has.

The question box conducted by Mr. Kindig demonstrated what Dr. Miller told me once when I asked him in regard to a proposed program: "Young man, you need no program. You can do better with a question box than with a dozen set programs."

Mr. Neilson, of Anderson, supplemented Mr. Davis in his number, dealing with "The Divisible Brood Chamber." Considerable discussion followed this number.

The Hon. Mason J. Niblack, of Vincennes, was elected president; C. H. Baldwin, vice president; Geo. W. Williams, secretary; and E. A. Dittrich, treasurer.

As there were a number of members who were expecting to attend the Denver meeting, it was proposed that all of the members there present should confer and share equally the duties of the delegate. Mr. B. F. Kindig was named as the delegate, and John Bull, and E. S. Miller alternates.

A resolution was passed endorsing the action of the legislatures in passing the present Foul Brood Law, and asking them to still support and continue it.

GEO. W. WILLIAMS, Sec.

49th Annual Meeting of the Michigan Affiliated Bee-Keepers' Association

East Lansing, Mich. Dec. 9th and 10th, 1914

The annual meeting of the Michigan Affiliated Bee-Keepers' Association was held in the Entomology Building of the Michigan Agricultural College, East Lansing, on Wednesday and Thursday, December 9th and 10th.

President Jenner E. Morse, Saginaw, occupied the chair and called the meeting to order.

Owing to the unavoidable absence of the Secretary, Mr. O. H. Schmidt, together with the records of the last meeting, the reading of the minutes of that convention was dispensed with.

President Morse, after welcoming the beekeepers to the convention, spoke of the necessity of awakening

the Michigan beekeepers' interest in the work of the association. More members were needed so that the funds in the treasury would be large enough to warrant more expenditure in making up the program and providing larger and more numerous premiums for the honey, wax, and aparian exhibits of the beekeepers.

Mr. David Running, of Fillion, Michigan, entertained the meeting with a valuable address on "Out Apiaries and the Production of Extracted Honey in Huron County." Having had a varied experience with several hundred colonies of bees, Mr. Running spoke with the authority of one who

knows. The speaker stated that where one was keeping more than a hundred colonies and was depending on the nectar from one source alone, as from clover, then it paid well to establish outyards, with from fifty to a hundred colonies in one location. From his own experience he stated that even when the extra expense of travel and maintenance of the outyards was taken into consideration the increased crops more than overbalanced the extra outlay. Never keep all your eggs in one basket was the motto of Mr. Running.

In establishing outyards the speaker stated that he tried to find a locality where white clover grew freely and where alsike clover was being raised for seed. Alsike yields nectar very freely just before ripening and when grown for seed, the nectar producing period is lengthened to its fullest extent and for these reasons a locality where alsike is grown for seed is usually a good one in which to locate an outapiary. Mr. Running stated that he had no trouble in getting a location for his bees, as the farmers in his locality appreciated the immense good the bees do in pollenizing the clover blossoms and so increasing the yield of seed. Knowing this, the farmers welcomed an apiary on their farm.

The bees are moved to the outyards in the spring of the year, just as soon as the roads are good, usually about the time dandelions are in bloom.

Mr. Running has a large number of surplus combs and hive bodies for the storing of the honey and these are all carried to the home yard for extracting and storing at end of season. For this reason and the convenience of having one extracting outfit and central plant, buildings are not required at each out apiary.

The eight framed Langstroth hive is used exclusively by Mr. Running and a summary of his management is as follows:

Bees are taken out of the cellar and placed on their summer stands. They are not disturbed again until the time comes to move them to the outapiary, which is done about dandelion or fruit bloom time. At this time all queens are clipped and an extra hive body, with drawn combs placed on brood chamber. No queen excluder is used. The queen has the use of the two brood chambers, and when clover commences to yield nectar each colony is examined, and all queens shaken down

into lower brood chamber while the queen excluder is placed directly on the lowest or first brood chamber. In place of returning the upper or second brood chamber, now well filled with brood, directly over the first brood chamber another hive body with drawn combs is placed on first hive body and the upper brood chamber is placed above the second hive body. Thus, at this time the colonies are occupying three hive bodies and the queen is in the lowest one with an excluder above to prevent her going up any more. This procedure gives the queen room to lay at full capacity and the bees lots of room to store nectar.

Ten days after this shaking and putting one-third hive body, all the brood chambers, now the lowest hive body, are shaken into a hive body containing only full sheets of foundation, and one or two extra hive bodies with drawn combs are placed immediately above the new brood chamber, with excluder between. Queen cells are also removed from the third hive body at this time. The old brood chamber is now placed right on top of the three or four hive bodies and each colony now has four or five hive bodies and a capacity for from 100 to 150 lbs. of surplus honey. These may or may not all be needed. In ten days all queens' cells must be removed from the top hive body. If increase is needed an entrance is given at the back of this top hive body and the young queen allowed to hatch and mate and a new colony formed.

This method usually holds swarming down to a minimum, and with few examinations during the summer an outapiary can be run in connection with the home apiary.

All the honey is taken off with bee escapes and the bees are not disturbed and made cross when these are used.

The president next called on Mr. Frank Pease, Marshall, Mich., whose topic was, "Living in the North and Keeping Bees in the South."

Usually, beekeepers live in the south and keep bees in the north, but Mr. Pease lives in the north in winter and keeps bees in the south in summer.

The southern yard is situated in Louisiana and Mr. Pease gave a very interesting account of beekeeping in that part of the country.

Conditions there call for treatment

quite different from that in Michigan. Bees fly nearly every day of the year and gather pollen almost every month of the year, with a little nectar coming in sometimes during the winter months. The spring flow of nectar commences in February and continues with intermissions from that time until the main flow closes in August or September.

The sources of nectar in the order of yielding are as follows: fruit bloom, mostly plums, in February, then peaches directly following the plum blossoms. In March the first good flow comes from willow and rattan. Sweetgum, persimmons, muskardine, wildgrape, cotton wood and species of vines together with many varieties of the wild pea yield quite a little nectar when conditions are favorable. Thorny locust and touch-me-not bring the flow into July, which is thought to be the best honey month. This year, however, conditions were unfavorable and the bees consumed nectar rather than store it.

The dry summer of nineteen fourteen was generally unfavorable and some colonies were consuming honey from July until the present time.

Bees keep strong all year and one should be on hand to divide the colonies in March, as the two halves would have time to build up for the main flow.

Swarming may commence in February, but usually occurs from March or early April through to June.

New increase soon build up into strong colonies and where one is running for increase alone a colony may be divided into several parts.

Colonies need about forty pounds of honey to keep them over winter, and all surplus combs must be kept over the colonies all winter to prevent the wax moth larvae destroying them.

While the address of Mr. Pease was very enjoyable, most of the Michigan beekeepers seemed to be satisfied that the Wolverine state offered more attractive conditions than those enjoyed farther south.

"The Future of Beekeeping" was the next subject. Mr. E. D. Townsend, North Star, Mich., is running about eleven hundred colonies at the present time and with almost forty years' experience in beekeeping, the convention listened with much interest when he took up his subject.

In speaking of the future one can only judge from the past and pres-

ent indications. Mr. Townsend reviewed conditions of nearly forty years ago when the bee gum or box hive was almost the only hive in which bees were kept, and when all surplus honey was stored in caps. These caps gradually decreased in size until a box or cap, holding about six pounds was used. Many beekeepers thought these were too small for the bees to work in, and prophesied failure for those progressive beekeepers who used them. However, the size of the caps or supers were gradually reduced until the one pound section used today gradually came into general favor.

Mr. Townsend also watched the extractor come into general use in his early beekeeping days. Disease among bees was unknown; but as modern hives came into use, some form of winter protection was found to be necessary and the chaff or double walled hive or the bee cellar became necessary.

After a while disease appeared and this together with several successive hard winters played havoc with those beekeepers keeping from one to twenty colonies but who seldom paid the bees much attention. The speaker stated that the same process is at work today and the beekeeper, whoever he may be, who does not post himself on methods of management and the knowledge of the treatment of bee diseases, is fast following those who have lost all their bees. Disease and hard winters will eventually get the careless or ignorant beekeeper.

The weeding out of the poorer beekeeper is proceeding and the day will soon come when the great bulk of honey will be produced by the beekeeper who is willing to make a study and business of beekeeping.

From present indications Mr. Townsend believes that the future will see fewer beekeepers but more colonies kept. Beekeeping will enter the field of specialties and one will have to specialize and keep many colonies in order to successfully compete with others and to assure a livelihood for himself and family.

After a short recess the program was continued and before calling on the next speaker, President Morse on behalf of the convention thanked Professor R. H. Pettit for his kindness in providing the members with the convention badges. These were in gilt and white and looked very attractive and were much appreciated

by the beekeepers present. They made a nice souvenir of the meetings.

A discussion of bee cellars was led by Mr. L. Griggs of Flint, Mich. The speaker stated that he was building two bee cellars and wanted to get as much information as possible on their correct construction from the beekeepers present.

After several bee men had described their cellars it was found that a great variation of construction was possible and yet winter bees successfully. The main points brought out were that very dry cellars were not as successful as those containing more humidity, providing the temperature did not go too high. Some form of ventilation, while not absolutely necessary, helped to winter the bees better. A damp cellar with good ventilation often wintered bees well.

Very cold cellars were not conducive to good wintering. An even temperature of 45 degrees F. was about the right one to keep cellar.

Mr. L. A. Aspinwall, Jackson, Mich., one of Michigan's veteran beekeepers and inventors, gave a very interesting account of some of our older beekeepers and their work. Looking back over a period of sixty years, Mr. Aspinwall recalled the name of the Rev. L. L. Langstroth, inventor of the movable frame hive and author of "Langstroth on the Hive and Honey Bee." Mr. Heddon, an inventor of the Heddon Hive, was also known to the speaker. Among other names of prominent Bingham beekeepers, Quinby, Cook, Hutchings, Ellwood and others were mentioned and an interesting account of their life's work on beekeeping given. Mr. Aspinwall is himself the inventor of the Aspinwall non-swarming hive and is now engaged in writing a book on beekeeping.

The evening session of the convention opened with an illustrated lecture by Prof. R. H. Pettit, of M. A. C. A number of views of Austrian, German, Turkish, Russian, Dutch, Belgian and French apiaries were shown and their methods of management outlined. This was an extremely interesting part of the program and showed Michigan beekeepers the many various kinds of straw skeps, clay hives, box hives and other peculiar receptacles in use by the beekeepers of those countries. Once more Michigan beekeepers seemed satisfied that Europe did not offer the same scope to the beekeeper as the state of Michigan.

Apiaries of from one to a dozen colonies are the rule in those European countries, and the crops are small. Here we have larger apiaries and more certain crops.

Immediately following Prof. Pettit's address, F. E. Millen, State Inspector of Apiaries, gave an illustrated talk on "Features of Interest about the Honey Bee." Slides of the external and internal parts of the honey bee were shown, and the interesting features explained. Bees carry the nectar from the fields in their honey stomachs and then store it in the cells after regurgitating it back through the mouth parts. The antennal cleaner, or the bee's brush and comb on the front legs, show how bees clean themselves. Where and how the pollen is stored on the hind legs while the bee is gathering it and returning to the hive, and other interesting features were shown and discussed.

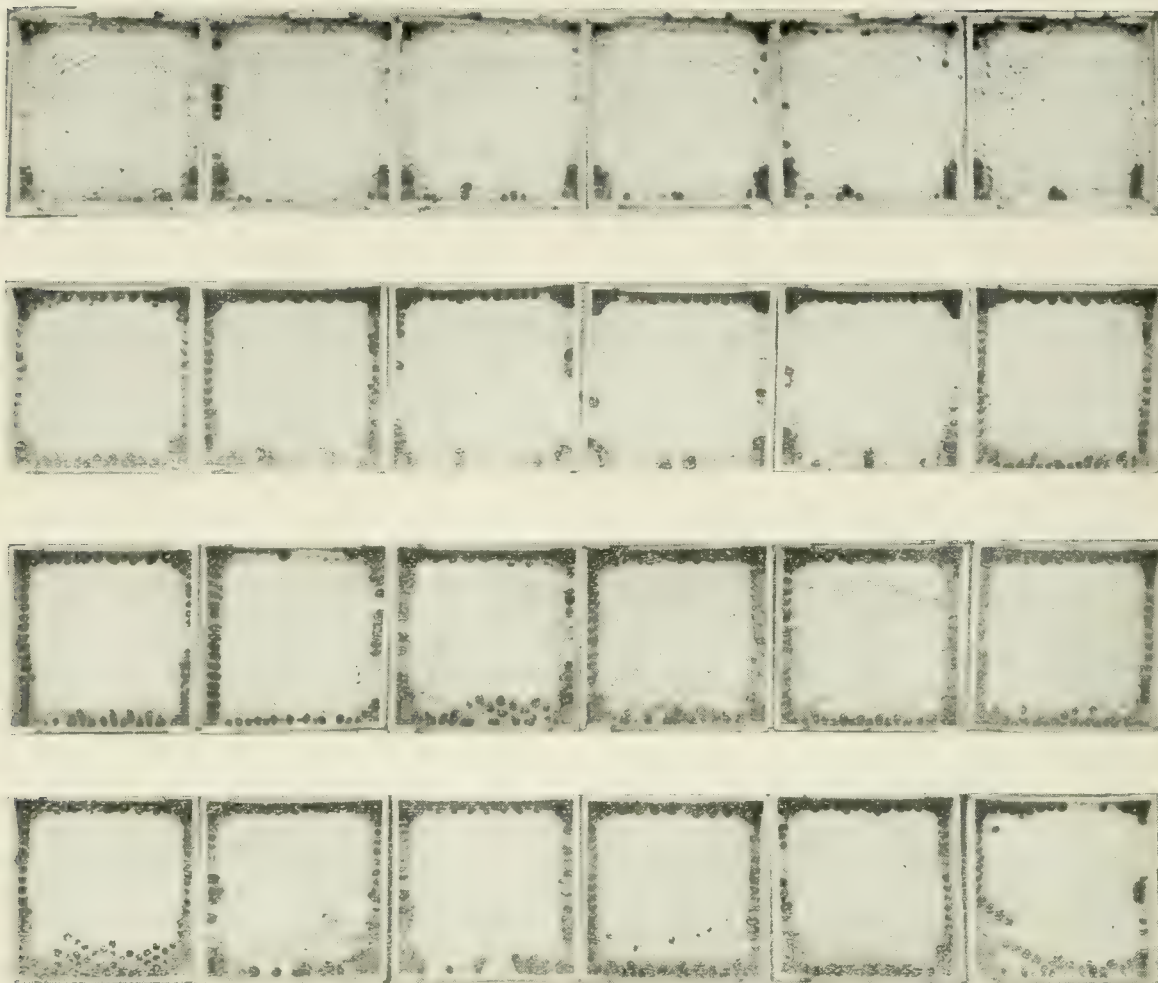
One of the features of the convention was the Question Box. This was ably handled by Mr. W. J. Manley, Sandusky, Mich., and many perplexing questions were taken up and disposed of satisfactorily. The question box aroused considerable discussion and kept everyone interested.

On Thursday morning the meeting commenced at 9 A. M. and the "Foulbrood Situation in Michigan" was taken up by the Inspector of Apiaries." During the past season, evidence of much foulbrood was found and as far as possible remedial measures were taken. One or two minor changes in the law were advocated and the need for more help indicated.

The most successful method of fighting foulbrood was by educating the beekeepers to the fact that a healthy apiary meant more honey and increased profits, while the opposite is true when disease gets into the bee yard.

Summer field days, of which two were held last season, are being planned for nineteen fifteen, and it is hoped to meet a large number of beekeepers in this way. The object of these meetings is to make sure that every beekeeper present is able to identify the disease and is familiar with the methods of treatment. Methods of management are also discussed and those present often gain a lot of useful information.

The next item on the program was an address with illustrations by Prof. Morley Pettit, Ontario Provincial Apiarist, Guelph, Canada. Prof. Pet-



Reading from top, Extra Fancy, Fancy; Number One; Number Two

tit's face is a familiar one to the Michigan beekeepers and his visit amongst us once more was very welcome.

Prof. Pettit showed a great many views of Ontario apiaries and other interesting bee slides. Conditions in Ontario are very similar to the conditions found in Michigan and from the apiaries seen one would have trouble to say whether they were from Ontario or Michigan.

"The Age and Durability of a Queen Bee for Profit in the Production of Comb Honey and My Method of Requeening" was the subject with which Mr. A. H. Guernsey, Ionia, Mich., entertained the meeting. The speaker stated that he was not in favor of requeening any or all colonies at stated times, as every year or every two years. Mr. Guernsey watches the work of the individual queen and directly he notices a failure on her part to lay prolifically then that queen is taken out and the colony requeened. Young queens are liable to fail as

well as the older ones and so all are given individual attention.

Queens of one's own breeding are usually as good as those secured from queen breeders, especially where one breeds from selected stock. Every beekeeper should produce a certain number of his own queens each year. Mr. Guernsey does not breed queens for market, but tries to raise sufficient to supply his own needs.

Nuclei are taken from his choicest colonies preparing to swarm and with the queen cells thus secured a number of nuclei are started. Two frames are taken from an eight frame colony and three frames from a ten frame colony. Later in the season if more queen cells are needed, stimulation of that colony is resorted to. The speaker stated that he secured as fine queens as could be desired, by this method.

After the report of Mr. E. D. Townsend on the work of the National Convention held at St. Louis, last February, the meeting adjourned until the

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured, or patched up sections; sections weighing less than ten ounces.

afternoon, when the business session was held.

The Committee on awards reported the winning exhibits as follows:

Best five sections—1st, Mr. C. H. Abbott; 2nd, Mr. Floyd Markham.

Best jar of extracted honey—Mr. Floyd Markham.

Best exhibit of beeswax—Mr. G. Frank Pease.

Best exhibit of bee supplies—Mr. E. M. Hunt.

Resolutions were moved and supported that letters of condolence be sent to the families of the late Mr. Bingham of Colorado, formerly of Michigan, and the late Mr. Bigelow of Williamston.

The members decided to make the dues of the Michigan affiliated branch \$1.00 in nineteen sixteen instead of 50 cents as at present.

The election of officers resulted in the following members being elected: President, Mr. David Running, Filion.

Vice President, Mr. Frank Pease, Marshall.

Secretary-Treasurer, F. Eric Millen, East Lansing.

Delegate to the National Convention at Denver, Colo., in February, Mr. David Running.

1st alternative, Mr. E. D. Townsend.

2nd alternative, Mr. F. Eric Millen.

The city selected for the next convention was Grand Rapids; this brought the convention to a close and the beekeepers agreed that many valuable points had been gleaned, a pleasant time enjoyed by all in attendance.

F. Eric Millen,
Secretary-Treasurer,
East Lansing.

..ANNOUNCEMENT..

The annual dues of the National Beekeepers' Association are now \$1.50 in addition to your local dues.

Who Are Now Members

A decree rendered by the delegates at the Denver meeting last month declared all paid-in-advance members of the affiliated associations of the National, members of the National WITHOUT THIS ADDITIONAL FEE BEING COLLECTED. In other words, if you are a member of one of the several affiliated associations, your membership in the National is paid during the life of your membership in the affiliated association.

Who Are Not Members of the National

All previous members of the affiliated associations who are in arrears in their dues, will be required to pay the full fee of \$1.50 per annum.

All persons joining the National Beekeepers' Association since February 19th and thereafter will be required to pay annual dues of \$1.50.

When mailing your one dollar and fifty cents to Secretary Foster, request that he take a dollar of this fee and pay your subscription to the Beekeepers' Review, the official organ of the National Beekeepers' Association, for one year.

If you prefer, you can leave the entire fee in the national treasury; instead of subscribing for the Review, but the fee is the same in either case.

If more convenient, the National annual dues can be sent to your local secretary, or to this office, they in turn handing the fee to National Secretary Foster.

If the members will keep in mind that there has been no National fee for two years past, and that this \$1.50 is in addition to the local dues they have paid during this period, less confusion will occur.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

CHICAGO—The market on comb honey is quite strong at 17c to 18c per lb. for the best grades of white comb. The ambers range at from 13c to 15c per lb. The volume of trade is not large, but there is no surplus of stock. That which is candied or out of condition is sold at whatever the opportunity offers.

Extracted is still plentiful and the prices are easy on all grades with the exception of clover and basswood which ranges at about 9c per lb. with something fancy in a small way at 10c per lb. Amber grades sell at from 7c to 8c per lb. if suitable for table use, but carload quantities are easily bought at 6c per lb.

Beeswax is steady at 30c per lb. where it is of good color and free from sediment.

R. A. BURNETT & CO.,
173 W. South Water Street.
February 11th.

HONEY LABELS — Lowest price.
PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON Ontario, Ore.

FOR SALE—Fancy orange-blossom honey. Send for price list. JAMES McKEE, Riverside, Calif. tf

IF YOU want bees and queens from Louisiana in April send for my price-list H. C. AHLERS, West Bend, Wis.

FOR SALE—Extracted Honey, Basswood and light Amber in 10 lb. pails. Can be sent parcel post. Write for prices. E. E. MOTT, Glenwood, Mich.

FOR SALE—Fine well ripened white clover honey in 60 pound cans, also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—Extracted clover honey thoroughly ripened and of fine quality. Put up in new cans two in one case. JOS. HANKE, Pt. Washington, Wisc.

FOR SALE—Choice Aster Honey, with rich and delicious flavor, packed in 60 lb cans, two in a case, @ 7c per pound, F. O. B. H. C. Lee, Box 254, Brooksville, Ky.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia Pa.

FOR SALE—Extracted honey, light amber flavor similar to Clover and Basswood mixed. Car lots or less in 600 lb bbl. at 6c per lb. F. O. B., N. Y., Key West or New Orleans, sample 10c. M. E. ENGLE, Herradura, Cuba.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horse-mint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

FOR SALE—Alfalfa and sweet clover blend extracted honey in 60 lb. cans, 10 lb. and 5 lb. friction top pails. No honey taken from the hive or extracted until after honey flow is over. J. B. RAMAGE, North Yakima, Wash. R. F. D. No. 7.

FOR SALE—Harley Davidson motorcycle, 1914 model, fully equipped and good as new, a bargain. E. S. MILLER, 508 College Ave., Valparaiso, Ind.

WANTED—White Sweet Clover Seed. The National is oversold on sweet clover seed, and if any of our readers have some, or know of any that can be bought, we would be pleased to hear from them, stating amount you have and the price you will take for it on board car at your station. Address the BEE-KEEPERS' REVIEW, Northstar, Michigan.

FOR SALE—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

FOR SALE—50,000 pounds light extracted honey, well ripened and mild flavored. Two sixty pound cans to case, 7½ cents by the case, in ten case lots, even seven cents per pound in fifty case lots. Write H. G. QUIRIN, Bellevue Ohio.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIREN, North Yakima, Wash.

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, are furnished at 30c. per thousand postpaid. Advertise Honey. Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to
PEARL CARD CO., Dept. A3, Clintonville, Conn.

BEEES AND QUEENS

FOR SALE—25 colonies of bees heavy with stores that will be sold at a bargain. No disease. Write for further particulars. Address G. M. Withrow, Mechanicsburg, Ill. tf

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. BEEBE, Mosinee, Wis., Route No. 1.

FOR SALE—Twenty-five colonies of heavy, healthy bees. Forty comb honey supers complete. Empty bodies, etc. Two incubators. Two horse engine, with saw and feed grinder. Address G. M. Withrow, Mechanicsburg, Ill.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to introduce Queens" 15c. "How to increase," 15c, both 25c. Untested queen \$1.00. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich.

QUINN'S QUEENS OF QUALITY—Grey Caucasians, the long tongued (6.66 m. m.) bee. Mendelism does it. Gentlest of all bees. CHAS. W. QUINN, Box 389 Beaumont, Texas. tf

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c.; 6 for \$4.50; \$8.00 per dozen. No foul brood. D. G. LITTLE, Hartley, Iowa.

I CAN supply you with Golden or three-banded Italian queens. Tested, \$1.00 each; six or more, 85c each. Untested 75c each; 6 or more 65c each. Bees per pound, \$1.25. Nuclei per frame, \$1.25. Write for prices on large orders. Everything guaranteed.
I. N. Bankston, Buffalo, Tex. tf

GOLDEN or Three-banded Italian Queens ready the first of April.
Tested Queens, each.....\$1.00
6 or more, each.....85
Untested, each.....75
6 or more, each.....65
Special prices on long orders. Everything guaranteed. I. N. BANKSTON, Buffalo, Texas. tf

GOLDEN, 3 Band and Carniolan queens. Tested \$1.00 each; 3 to 6 95 cts., 6 or more 90 cents each. Untested 75c., 3 to 6, 70c., 6 or more 65 cents each. Bees per pound.....\$1.50
Nuclei per frame.....1.50
Ready to go April 1st. Address C. B. BANKSTON, Buffalo, Lion Co., Texas. tf

QUEENS—California queens, nuclei, and bees bred from the best Doolittle stock, ready for shipment at once. Queens, untested, 75 cts; per dozen, \$8.00; tested, \$1.25; per dozen, \$12.00; mismated, one year old, 50 cts.; per dozen \$5.00; tested, one year old, 75 cts.; per dozen, \$8.00; nuclei, two-frame, \$1.50; three-frame, \$2.25; five-frame, \$3.00; ten-frame colony, \$4.50. Bees by pound: One-half lb., 75 cts.; 1 lb., \$1.00. Add prices of queens desired to all above prices of bees and nuclei. Delivery guaranteed. No disease. Address SPENCER APIARIES CO., Nordhoff, Cal. tf

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part of all their bees. Figures following address indicate number of colonies each have for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Wilmer Clark, Eastville, N. Y.—150.
A. S. Crotzer, Lena, Ill.—94.
G. M. Withrow, Mechanicsburg, Ill.—25.
L. R. Beebe, Mosinee, Wis.—200.
Wm. McKibben, Ontario, Ore.—160.
Wilmon Newell, College Station, Texas—100.
The E. F. Atwater Co., Meridian, Ida—50 to 300.

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5 $\frac{3}{8}$ in. depth supers nailed and painted (220-10 fr. 40-8 fr. ext. sup. 5 $\frac{3}{8}$ depth 50-10 fr. 10-8 fr. ext. H. bodles filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address WM McKIBBEN, Ontario, Ore.

500 SAMPLE QUEENS at 40c on first 500 orders. Moore's Strain Leather Covered Italians. Write for particulars and prices in quantity. April and May orders booked now on 10 per cent deposit. Orders filled promptly, or notice given when such deliveries can be made. Regular prices: Untested Queen, \$.75, Six \$4.25; Twelve, \$8.00. OGDEN BEE & HONEY CO., Ogden, Ut., Timberling Rigs, Breeder. rf.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—300 lbs. unhulled yellow sweet clover seed. L. P. Holms, Newcastle, Wyoming.

WANTED—200 Drawn combs in wired L. frame. J. B. MASON, 33 Lexington St., East, Boston, Mass.

WANTED—Reliable man experienced in comb and extracted honey production. J. E. PATTON, Halleck, Nevada.

We have for sale at Plano, Ill. 100 lbs. of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb., in 50 lb. lots or more. Address The Bee-Keepers' Review, Northstar, Mich.

LEWIS BEEWARE—Root's Extractors smokers, etc.—Dadant's Comb Foundation. Large stock always on hand for prompt shipment. Western Beekeepers can save money by patronizing the oldest co-operative association of beekeepers. Illustrated catalogue free. The Colorado Honey Producers' Ass'n Denver, Colo.

We have a quantity of white sweet clover seed at Buhl, Idaho that we can furnish our members as long as it lasts at 20c a pound of hulled seed and 13c for the unhulled variety. You should order 50 lbs. to get this low rate. Address THE BEE-KEEPERS' REVIEW, Northstar, Mich.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

We have at Plano, Ill. 200 lbs. unhulled white sweet clover seed that we can furnish at 13c per pound. You should order 50 lbs. or more to get this rate. Order through the Review office.

RAW FURS—Honest grade and full market price shipments held separate on request. I pay charges on lots worth \$10 or over. You get value rec'd when you ship so ask for price list and mention Review. GEO. KRAMER, Valencia, Pa.

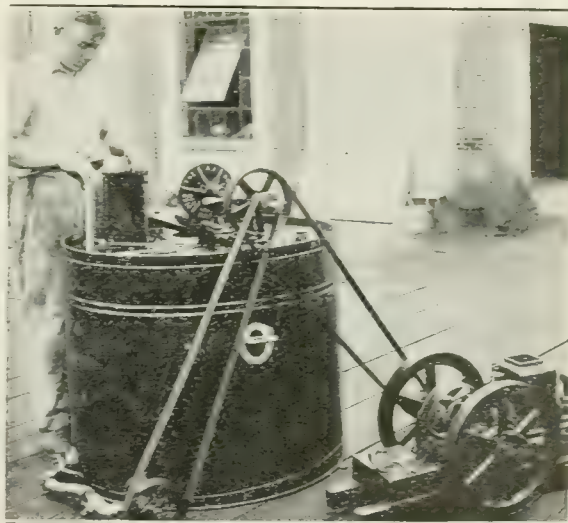
White Sweet Clover Seed

We have at Syracuse, N. Y. 250 lbs. Unhulled white sweet clover seed that we can sell in 25 lb. or more lots at 16c. per pound. The market of white sweet clover seed is very firm, and we advise the forehanded purchaser to buy early, while the stock is large. Address The BEE-KEEPERS' REVIEW, Northstar, Michigan.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg'rs. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express @ \$5.41. Cash with order.

Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP** then run them with a **NATIONAL 1 $\frac{1}{2}$ H. P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.



We quote the engine, four-frame Automatic Extractor, including honey pump, belting and everything necessary pertaining to the outfit at \$84.00.

Root Automatic Extractor, National Engine and Honey Pump in Position.

A one inch galvanized pipe, threaded with elbows, transfers the honey from the pump to the honey tank at one side.

Six-frame extractor outfit as above at \$92.00. Eight-frame extractor outfit as above at \$99.00. Without honey pump deduct \$17.50.

The above prices are List, from which a considerable discount is made to members.

THE BEE-KEEPERS' REVIEW
Northstar, Mich.

FOR SALE—Two dozen mailing cases bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address **THE BEE-KEEPERS' REVIEW**, Northstar, Michigan.

A Bee Location in Northern Michigan For Sale

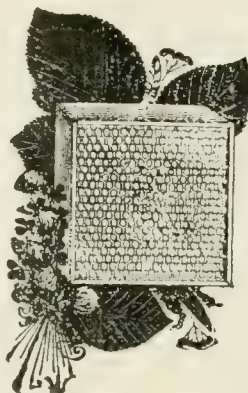
Are you now in a paying location for honey? Does your crop each year amount to as much as it ought? Would you like to move to a Northern Michigan Raspberry location where crops rarely ever fail? Wouldn't it be fine if you could move right into such a place with the cellars and honey houses all built! Then there is a log-cabin where you can "camp in" thrown in. 45000 lbs. of honey harvested in these yards in northern Michigan two years ago, and this is the same location. 400 colonies are now wintering in the three cellars, but they will be moved out in the spring. Then the buildings and cellar and good will, will be sold. If you are interested in a good thing, address Raspberry Location, Care **BEE-KEEPERS' REVIEW**, Northstar, Michigan.

Notice to Secretaries

During 1914, five of our most energetic secretaries sent in 226 subscribers to the Review, for which the members feel very grateful. To encourage this feature of our work, and for the sake of letting the members know who of our Secretaries are "workers," we are going to keep tally during 1915 of the number of subscribers each Secretary sends in, and their names with the number of subscribers sent, will be published in the Review from month to month. Not with the idea of paying them for their work, but as an honorary recognition of service rendered, we are going to offer the five sending in the largest number of subscribers during 1915, a year's subscription to the **REVIEW** for 1916. The list to date stands as follows:

James A. Stone, Illinois.....	61
F. C. Bowman, Idaho.....	16
P. E. Crane, Vermont.....	10
E. G. Carr, New Jersey.....	9
J. S. Whittemore, Mass.....	7
F. E. Millen, Michigan.....	7
Geo. W. Williams, Indiana.....	6
A. D. Wolfe, Missouri.....	5
Floyd W. Ray, Minn.....	4
E. R. King, Ohio.....	4
Floyd E. Smith, Oregon.....	3
H. C. Klinger, Pennsylvania.....	3
S. W. Snyder, Iowa.....	2
S. King Clover, Washington.....	2
C. H. Stinson, Idaho.....	2
H. E. Grahm, Texas.....	1

National Writing Paper and Envelopes for the Subscribers



We are now better prepared than ever to furnish the members, or subscribers with their writing paper and envelopes. The paper headings will contain the new Officers and Directors of the National elected at the Denver meeting in February. The envelopes will be printed with return card as usual. Paper and envelopes can be printed with either of the three cuts shown above. In ordering, mention which is preferred.

We quote 250 Envelopes, post paid for.....\$1.50

We quote 250 Paper, post paid at.....1.50

If you prefer to have your printing done at home, we can furnish you with any of the above cuts to print from at only 50c each, postpaid. Address

THE BEE-KEEPERS' REVIEW, Northstar, Michigan

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

"Here is the Answer;" in WEBSTER'S NEW INTERNATIONAL

THE MERRIAM WEBSTER

Every day in your talk and reading, at home, on the street car, in the office, shop and school you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *jujutsu*. What is *white coal*? This New Creation answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority*.

400,000 Words.
6000 Illustrations.
Cost \$400,000.
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The only dictionary with the *new divided page*,—characterized as "A Stroke of Genius."

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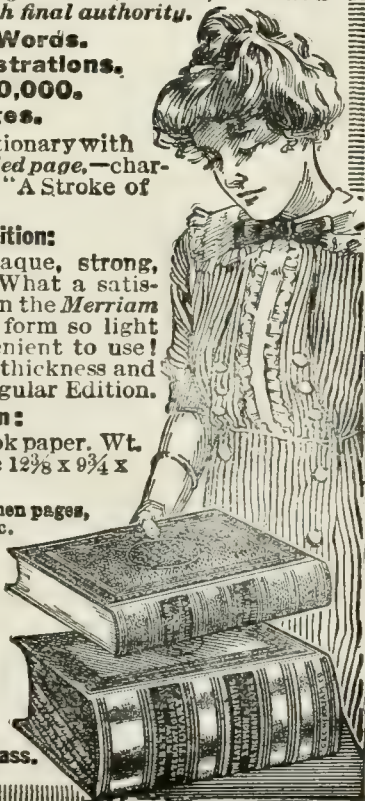
On thin, opaque, strong, India paper. What a satisfaction to own the *Merriam Webster* in a form so light and so convenient to use! One half the thickness and weight of Regular Edition.

Regular Edition:

On strong book paper. Wt. 14¾ lbs. Size 12¾ x 9¾ x 5 inches.

Write for specimen pages, illustrations, etc. Mention this publication and receive **FREE** a set of pocket maps.

G. & C. MERRIAM CO.,
Springfield, Mass.



BOOKS ON PRACTICAL BEE CULTURE

Parcel Post—Include Postage as weight indicates

Post Paid—Where no weight is mentioned

- A B C and X Y Z of Bee Culture, cloth.... \$2.00
A B C and X Y Z of Bee Culture, half leather.... 2.40
A B C and X Y Z of Bee Culture, German.... 2.50 3 lbs.
A B C de L'Apiculture French ed..... 2.00
El A B C Y X Y Z de la Apicultura, Spanish.... 2.00
Langstroth on the Hive and Honey Bee Reprint.... 1.00
Advanced Bee Culture, W. Z. Hutchinson.... 1.00 2 lbs
Biggle Bee Book.... .50
British Bee-keepers' Guide-book, Cowan.... 1.00 1 lb.
Cook's Manual of the Apiary 1.15 2 lbs.
Doolittle's Queen-rearing... .75 1 lb.
Fifty Years Among the Bees, C. C. Miller.... 1.00 2 lbs.
First Lessons in Bee-keeping .50
Honey-bee, The—Cowan. 1.00 1 lb.
How to Keep Bees—Mrs. Comstock.... 1.00 2 lbs.
Humble Bee, The—F. W. L. Sladen.... 3.25
Irish Bee Guide, Rev. J. G. Digges.... 1.00 1 lb.
Langstroth, rev. by Dadant, cloth.... 1.25 2 lbs.
Modern Bee-farm, S. Simmins 2.00 2 lbs.
Practical Bee Guide.... 1.00
Quimby's New Bee-keeping.. 1.00 2 lbs.
Wax Craft.... 1.00
Increase Forcing the Queen to Lay; each.... .25 2c.
French edition, separate... .50 2c.
POPULAR BOOKS ON BEE CULTURE
Bee People, The, Margaret M. Morley.... \$1.50 2 lbs.
Children's Story of the Bee 2.00
Honey Makers, The Margaret M. Morley.... 1.50 2 lbs.
Life of the Bee, Maeterlinck 1.40 2 lbs.
Bee Master of Warrilow, The—Edwards.... .57 1 lb.
Lore of the Honey Bee.... 2.00
Queenie..... .75
Bee Models..... each 50c; 2 for 75.
Ten-cent Library Booklets. .10
Gleanings Library.....
.....50c each, 3 for \$1, 5 for \$1 50

RURAL BOOKS

- A B C of Carp Culture.... \$0.30 1 lb.
A B C of Potato Culture, paper.... .57 1 lb.
A B C of Potato Culture, cloth.... .85 1 lb.
A B C of Strawberry Culture, paper.... .50 1 lb.
A B C of Strawberry Culture, cloth.... .75 1 lb.
Tomato Culture.... 40 1 lb
Tile Drainage, W. I. Chamberlain.... .40 1 lb.
Maple Sugar and the sugar-bush, paper.... .30 1 lb.
Winter Care of Horses and Cattle, paper.... .30 1 lb.
How to Keep Well.... 1.00
The Dollar Hen.... 1.00
What to Do, paper.... .50
What to Do, cloth.... .75

Address All Orders

THE BEE-KEEPERS' REVIEW
Northstar, Michigan

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

James T. Johnson, R. F. D. No. 1, Percy, Ill.

Henry J. Zinn, 1135 Who. Ave., Forty Fort, Pa.

Rocky Mountain Bee Co., Forsythe, Montana

H. H. Thale, Maywood, Mo.

E. S. Smith, Westville, Ind.

B. F. Kindig, Elkhart, Ind.

Walter C. Morris, Yonkers, N. Y.

Fred H. Loucks, Lowville, N. Y.

Subscribe for the Review.

Ladies we need the cash!

59¢ for a \$1.50 Waist means 91¢ to YOU

10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 seller must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four Your money refunded if not satisfied.

GENERAL SUPPLY CO.
168½ BZ Delancey Street
New York City

National Members Having Honey for Sale

We are herewith submitting a list of subscribers having honey for sale. This list only includes those who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free, two insertions, to paid-in-advance subscribers to the Review, each year. Those wanting their name to appear longer can do so by paying 20c each additional issue. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzel, Lincoln, Ill.

HORSEMINT

Wilmon Newel, College Station, Tex.

RASPBERRY

O. H. Townsend, Butterfield, Mich.

ALFALFA

Wesley Foster, Boulder, Colorado.
Arizona Honey Exchange, Tampe, Arizona.

A. A. Lyons, Fort Collins, Colo.

AMBER

Quirin-The-Queen-Breeder, Bellevue, O.
Thos. Worthington, Leota Landing, Miss.
Latshaw Honey Co., Carlisle, Ind.
Penn. G. Snyder, Aibonito, P. R. -d4.
O. P. Hendrix, West Point, Miss.
G. Frank Pease, Shreveport, La.
A. D. Herold, Box 186, Sonora, Cal.
R. A. McKae, Velasco, Texas.
F. M. Morgan, Hamburg, La.
Otto Luhdorff, Visalia, Calif.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.
N. E. France, Platteville, Wis.
F. Gobell, Glenwood City, Wis.
M. C. Engle, Herradura, Cuba.

WHITE CLOVER

Wm. Fox, Withee, Wis.
Wm. E. Prish, Mineral Point, Wis.
Quirin-The-Queen-Breeder, Bellevue, O.
A. H. Fralick, Homer, Minn.
Joseph Kurth, Mineral Point, Wis.
E. B. Rosa, Monroe, Wis.
J. H. Allemier, Delphos, Ohio.
F. M. Morgan, Hamburg, La.-4.

BUCKWHEAT

N. L. Stevens, Route No. 18, Venice Center, N. Y.
Jas. McNeil, Hudson, N. Y.
E. J. Stahlman, West Berne, N. Y.

SAGE

George B. Lariman, 1066 E. Calif. St., Pasadena, Calif.
R. J. Krause, Dehesa, Calif.

"falcon"

Bee Supplies

SHIPPING CASES, EXTRACT-
ORS, HIVES, ETC. EVERY-
THING FOR THE BEE-
KEEPER

Send us a list of your require-
ments for next season and let
us quote you our very best fac-
tory prices.

"Falcon" supplies are made
with the greatest care and we
feel confident that you will be
well pleased with them.

Send for our Red catalog,
which will be sent postpaid.

All goods guaranteed. A trial
will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

"The Pearce Method of Beekeeping"

The Pearce method of Bee-
keeping is now being revised
and brought up to date. The
first edition of 5000 copies have
been some time out of stock and
Mr. Pearce is now rewriting the
entire work and bringing it up
to the very minute. It will be
the same size as the old vol-
ume, but contain many more
pages. The new work will be
ready for delivery by early
spring. Price 50c post paid, or
clubbed with a year's subscrip-
tion to the Review for only \$1.10.

Address the sole agents

The Bee-Keepers' Review
Northstar- Michigan

The Bee-Keepers' Review Clubbing List for 1915

In the following combinations we offer periodicals of sterling
worth. Remember, you are not receiving some premium of questionable
value, but a saving of dollars and cents on your 1915 reading matter.
The combination offers with the reduction we are able to allow are
as follows:

The Review	\$1.00	All five
Woman's World	.50	\$1.25
Household Magazine	.50	the bargain
People's Popular Monarly	.50	of the
Farm Life	.50	season

Total value **\$3.00**

Here is another good one:

The Review	\$1.00	Both for
The Youth's Companion	2.00	only \$2.25

The following are of
sterling cash value:

The Review	\$1.00	Both for
American Bee Journal	1.00	only \$1.50

Save \$1.30 on this combination.
The Review \$1.00 \$4.00 worth
Everybody's Magazine 1.50 for only
The Delineator 1.50 \$2.70

Another is:
The Review \$1.00 Both for
Reliable Poultry Journal .50 \$1.25

The Review \$1.00 Both for
Gleanings in Bee Culture 1.00 only \$1.50

The Review \$1.00 \$3.00 cash
Gleanings in Bee Culture 1.00 value for
American Bee Journal 1.00 only \$2.00

Special offer to new subscribers To those ordering early before
the supply is exhausted, we will send in connection with any of the
above combinations, the last eight months of the Review for 1914.
which contains the National convention report with many valuable
papers read at said convention, besides other articles of value not
appearing in other papers. Address with remittance.

The BEE-KEEPERS' REVIEW, Northstar, Michigan

GRAY CAUCASIANS

Their superior qualities are early breeding; great honey gatherers; comb honey cappings being beautifully white; very prolific; very gentle; great comb builders; not much inclined to swarm; give better body to their honey; not much inclined to rob; very hardy; never furious, good winterers everywhere; the best all-purpose bee. Send a trial order for a queen or nuclei and be convinced. Prices on application.

J. J. WILDER, Cordele, Ga.

Tumbler Shaped Jellies for Subscribers

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them.

Six oz. Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz.. \$4 50
Gross in 2 doz. paper reshipping case..... 2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs honey, Bbl. of 21 doz.. 3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at..... 2 75

Prices are f. o. b. Columbus, Ohio.

Address all orders to

BEE-KEEPERS' REVIEW

Northstar, Michigan

NOTE—We call the subscribers' attention to the fact that the above prices are a considerable lower than that of the glass trust.

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50..... \$5 50
½ gallon can including mailing case, per crate of 100..... 9 50
¼ gallon can, including mailing case, per crate of 100..... 7 50
½ gallon square round cornered syrup cans, 1¾ in. screw cap, per crate of 100..... \$ 5 50
¼ gallon square round cornered syrup cans, 1¾ in. screw cap, per crate of 100..... 4 00

We cannot furnish less than a full crate of the above at any price.

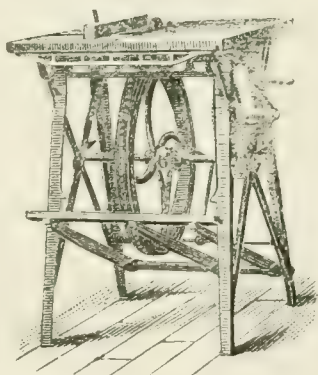
If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

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American Bee Journal

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Two Big Features--Beginning Jan. 1915

FRANK C. PELLETT, well known lecturer, naturalist and State Inspector for Iowa will write a series of articles well illustrated on "**Honey Flora of the United States.**"

QUEEN REARING IN ITALY. While in Italy last year, C. P. Dadant, had the opportunity to visit a modern queen-rearing establishment. He states that it is the finest and best kept apiary and queen establishment he has ever seen. Full particulars with illustrations in January number.

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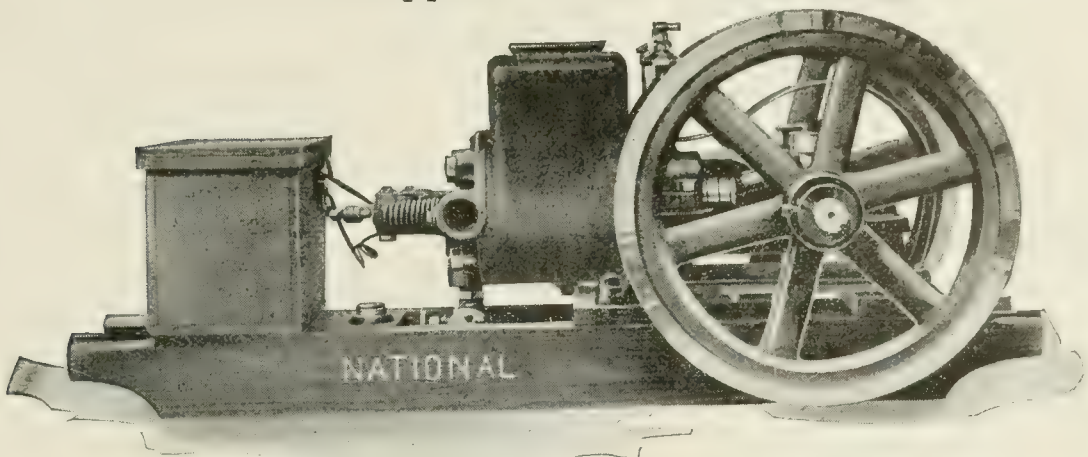
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National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncrated and supplied with fuel and lubricating oil.

Horse power, $1\frac{1}{2}$; bore, $2\frac{3}{4}$; stroke, $4\frac{1}{2}$; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, $1\frac{1}{4}$; floor space, 9x36; shipping weight 200.

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In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest possible prices. Below we give the prices for working not less than

	500 lbs.	300 lbs.	100 lbs.	50 lbs.	25 lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one per cent per pound for packing in assorted cartons.
Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acids.

Subscriber kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "Subscriber" also, put your mark on the packages so your wax can be recognized and mail the bill of lading, also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio.; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Mfg. Co., Falconer, N. Y.; Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE BEE-KEEPERS' REVIEW
NORTHSTAR - MICHIGAN

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TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can ..	\$2.25	\$2.15	\$20.00	
2 ½ lb. Can ..	2.75	2.60	24.00	
3 lb. Can ..	3.00	2.85	28.00	
5 lb. Pail \$5	4.75	4.50	42.50	
10 lb. Pail 7	6.50	6.25	50.00	

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	-	-	-	-	\$0.60 per case
24 cans in a case, 2 ½ lb. Cans	-	-	-	-	.71 per case
12 pails in a case, 5 lb. Pails	-	-	-	-	.65 per case
12 pails in a case, 6 lb. Pails	-	-	-	-	.70 per case
6 pails in a case, 10 lb. Pails	-	-	-	-	.49 per case
6 pails in a case, 1 lb. Pails	-	-	-	-	.55 per case

The above containers are known as "Buckets" in some localities.

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1 in a case, price	-	-	-	-	.32 per case
2 in a case, price	-	-	-	-	.60 per case
2 in a case in lots of 250 cases, price	-	\$59.00	per 100 cases		
2 in a case in lots of 500 cases, price	-	\$58.50	per 100 cases		
50 in a crate, price	-	-	-	-	\$10.00 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.					

ONE GALLON SQUARE SYRUP CAN, WITH 1 ¾ IN. SCREW CAP

6 in a wooden re-shipping case @	-	-	-	60c per case
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One per cent discount cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

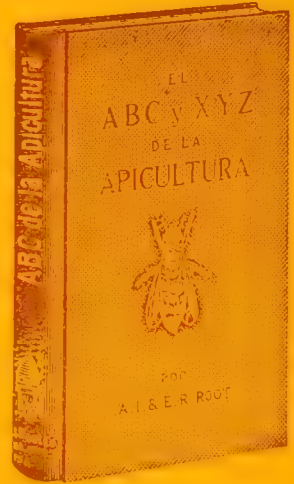
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Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a wide-spread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



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The Beekeepers' Review

Published Monthly



APR.

1915



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Did you ever lie awake nights thinking what a fine thing it would be to have your yard of bees isolated so far from neighbors, or wild bees that no mixing would occur? You could then breed queens from your very best stock and KNOW they would be mated with the very stock you wanted. Don't you see this would make it possible to select your breeding stock to suit yourself, breeding the queen from superior stock, the drones from others. The fact of the case, is, you would have this breeding proposition "under your thumb." The REVIEW has made arrangements with a firm who rear queens under identically the above condition, isolated on an island where there are no bees to interfere, and we will offer our readers queens from this stock during the coming season. This three-banded Italian stock is distinctly a honey gathering strain, and is direct from colonies that gave a surplus of 300 lbs. per colony, during a twenty-four day flow. This strain of pure Italians have been carefully bred up under these favorable circumstances for years, and without a doubt are much superior to any imported stock one can buy. Now it costs money to move a yard of bees to an island for the sole purpose of controlling the mating of queens, and it cannot be expected that these purely mated high grade queens can be sold at the price of ordinary stock. Although the firm who are breeding these queens for us have a thousand nuclei, or mating colonies, we look for a "scramble" after these superior queens this Spring and it behooves the party who expects to secure some of these queens to order early. Order NOW and have the queens mailed later, when you want them. We will begin mailing queens to our Southern trade the first of March, and the Northern trade as early thereafter as the weather will permit. If you want to save the trouble and risk of introducing your queens, they can be ordered in nuclei or with bees by the pound as you choose. Queens go by mail, post paid, and bees by express, not prepaid.

We quote prices as follows, shipped direct from our breeder in Florida:

Island Bred Italian Queens, shipments begin March 1st:

	1	6	12
Untested....	\$1.50	\$ 7.50	\$12.00
Tested.....	2.00	10.50	18.00
Sel Tested..	3.00	15.00	24.00
Tested Breeding Queens	\$5.00 and \$10.00 each		

Prices on Bees by the pound f. o. b. shipping point. Shipment begins May 10th:

	1	6	12
1/2 lb.....	\$1.50	\$ 7.50	\$12.00
1 lb.....	2.00	10.50	18.00
2 lbs.....	3.00	15.00	27.50

These prices are without Queens.

Prices on Nucleus and Full Colonies without Queens: Shipping now.

- 1 Frame Nucleus \$2.00; 2 Frame Nucleus \$3.00; 3 Frame Nucleus \$4.00
5 Frame Nucleus \$5.00; 8 Frame Colony \$7.50; 10 Frame Colony \$9.00.
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Knowing this stock so thoroughly and the breeder being of National reputation, we do not hesitate to recommend this stock to be as good as money can buy, either imported or domestic. Remember we will book orders in rotation. First come, first served. By ordering now you will be quite sure of getting your queens when you want them. It is quite likely to be different, later. Order with remittance.

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

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E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo.

PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9, 1913, at the postoffice at Northstar, Michigan, under the act of March 3, 1879,

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVIII

NORTHSTAR, MICHIGAN, APRIL 1, 1915

No. 4

The new secretary of the National Beekeepers' Association is Wesley Foster, Boulder, Colorado, to whom all correspondence relative to the association should be addressed.

Read announcement on page 153 and mail your National annual dues of \$2.00 to Secretary-Treasurer, Wesley Foster, Boulder, Colorado.

Bees Have Wintered Unusually Well

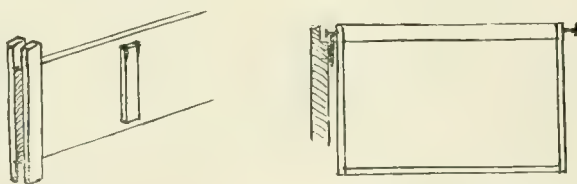
Reports coming to this office on condition of bees at this time are not very large, but what we have received, indicate that bees both in special repositories and outside wintering have come through the winter in unusually fine condition. A few reports reached this office early in winter from some locations where aster, or poor winter stores were in use, that bees were wintering poorly, in fact, some reported bees dead as early as January.

A Postal Card Report

Upon receipt of this April number of the Review, if each subscriber would drop this office a postal card report of the condition of his bees this spring, compared with the average season, also the average condition of your main surplus crop producer, be it Clover, Raspberry, Buckwheat, or what it may be, then we will be in a position to determine the season's prospect in better shape, and report the same in the May number of the Review.

Hive Making

If the reader will turn to page 96, March Review under the heading "Hive Making" by Adrian Getaz, you will find a description of a homemade brood frame and cleated separator for comb honey production. To better explain just how these two articles are made, we have had some cuts made illustrating this point, and we submit them here.



Cut number one shows how Mr. Getaz makes his separators and cut number two the mode of suspending his brood frame in the hive.

"The More Bees, the More Fruit"

We are in receipt of a letter from Mr. C. H. Clute, of Palmetto, Fla., detailing his observations, based on experience, regarding the effect of the pollination of orange blossoms, by the visits of the honey bee. Mr. Clute seems to be a beekeeper of the practical sort, but one who has, as well, the habit of careful observation. He says in part, that when he first located in Manatee County, Fla., the fruit growers were averse to bees, thinking that they injured the trees, or fruit, by their visits, much as grape growers a few years ago were hostile to bees, through ignorance of facts. Now, he says, they often come to him and ask him to locate yards in their groves, and sometimes even buy many colonies and place them among their trees for the purpose of increasing the chances of pollination; or rather, to eliminate altogether the element of "chance." He also cites notably the case of the Manatee Fruit Co., of Palmetto. This company owns three yards of bees for the purpose of cross-fertilization, and wants more. They say the more bees, and the nearer they are, the more fruit they have, and the finer the quality. In addition, Mr. Clute mentions the

grove of Mr. A. Goddard, of Terracea, Fla., a fruit grower, who has had an apiary of forty or more colonies in his grove for six years past, and in that time has not had a single poor year, but his fruit has invariably attracted the widest attention from all who have seen it. Both the amount and the quality are above average, says Mr. Clute. Our correspondent well raises the question, therefore, "Who ought to pay rent, the beemen or the fruit grower?" He asks this query, apropos of the article in *Gleanings*, page 795, by Mr. Louis Scholl, on rent and toll of beemen for locations of bee yards. More on this matter later.—E. G. B.

Splendid Results from Pennyroyal

A recent letter from our correspondent, Mr. E. M. Rennolds, of Hansford, Fla., is extremely interesting, as showing the fine winter range he has for building up his colonies. Here is what he says:

"I cut a bee tree October 3rd, hived the bees with only one-half frame of the original comb, and filled out with foundation. On January 30th, this hive swarmed, casting a fine swarm. How is this for my winter range? Yesterday I extracted from three colonies, and got 140 lbs. of pennyroyal honey, of fine body and color. Weather is still "bum," but bees are breeding up rapidly and if orange flow is good I expect to secure a fine crop of that honey, as the bees will be in fine condition for it." (This makes us wish we had some of that pennyroyal blooming about December, friend Rennolds. Can't you "ship" us a few carloads, for our use? Mighty fine to have a colony build up from a handful to a swarming condition in four winter months.) E. G. B.

We have just received our exhibit of hives, honey, bees and wax back from the Sub-tropical Fair, held at Orlando, Fla., middle of February. We exhibited bees under glass, allowing them to fly through the wall, and much interest was aroused by the sight of the busy workers under glass. Nothing will draw a crowd quicker than to let people see bees under glass; but, take off the glass, and how quickly most of them scamper! We mean the crowd, not the bees. By the way, we "cabbaged" seven blue ribbons.—E. G. B.

Unusual Demand for Bees

War seems to have only added impetus to the demand for bees, in this part of Uncle Sam's domain! No stagnation here, in the ambition of beemen, if the demand for "more bees" is any criter-

ion. Not long ago we received a card, a printed one at that, sent out broadcast over Florida, for "more bees," and there are several here, locally, that are buying up all they can get. Not only are there no bees for sale hereabouts, but those desiring them are unable to secure any. Not that there has been any decrease in the numbers of beemen or size of apiaries; rather, both have been and still are on the increase. Whatever effect the shipping of South American honeys may have on the markets of the U. S. the beemen of Florida do not feel at all pessimistic over the outlook. That much at least is certain. We wonder if the same condition prevails over many of the States to the north of us. Let us have reports from readers of the Review, showing the state of the market and the demand for bees in various sections.—E. G. B.

Undaunted by War Time Prices, Beekeeping will expand. Supply dealers report a record-breaking business during January and February, this year, which would indicate that there would be no letup in the expansion of the production of honey during the season of 1915, and this in the face of unsold crops being held over from last year. All other indication of expansion, is, there is much more call for bees at this time than there are bees for sale. With the high price of other rural products, the thought occurs that beekeepers would turn their attention more to other production than honey, but the indications will not bear out this theory.

The Sale of the Hive Product of Paramount Importance

It is just as important to know how to dispose of the honey crop, as to produce it. Study well the conditions surrounding the sale of the honey you propose to produce, before venturing into the business more extensively. It is a great mistake to go into the business of producing honey on a large scale, without first knowing how to dispose of the crop to a good advantage.

A good experience to the would-be expansionist, would be to send out west and buy up a quantity of the honey now on the market that can be bought for less than cost of production, and turn it into a profitable investment. When this is accomplished, it may be time to consider the matter of extending the business at the producing end.

The Honey Prospects in Florida from Orange

At present writing (March 4), the weather is so cool, windy and rainy that although orange bloom is just beginning, many colonies are almost on the verge of starvation, owing to rapid breeding the past month, and the inclemency of the weather. Unless

our "bum" weather eases up, the orange honey crop will be slight this year. However, we do not "holler before we are hurt," and there is yet time for a good yield. I have never yet seen, however, three GOOD years of orange honey in succession; the past two have been unusually fine, and so, for some reason, we cannot count very heavily on a good yield from that source this year. We hope to be pleasantly surprised.—E. G. B.

On another page we give the reader a glimpse of our Welch yard, showing one of our portable 12x16 foot honey houses. As will be seen, the bees are located in the edge of a woodlot, among standing timber, the front row being two rods into the woods, and the balance of the yard occupying a space six to eight rods further back into the woods. The bees are on the south side of the woods, facing south, and are packed in groups of two, in tar paper, and we show one of the groups in this number. Not a single colony dead in this yard of over 80 colonies, excepting one, which starved.

We wish to commend the point made in the following letter, by our friend, Mr. J. W. Eaton, Welaka, Fla. He writes:

"I sold \$700.00 worth of honey last year (1914), from 83 colonies, and increased to 140 colonies. I marketed the honey mostly in nearby towns, in pint and quart jars. I HAVE NEVER YET SHIPPED A POUND TO DISTANT MARKETS. I get from \$1.00 to \$2.00 per gallon, according to quality. I use the hybrid stock, and prefer them to pure stock." (We wish to emphasize the fact that our correspondent sells all his honey in nearby markets. If more would do this, there would be no overstocking of the larger marts. Of course, some cannot possibly sell locally but if all WHO CAN, will do so, the few who cannot will never glut a market. I know a town, where there are half a dozen beemen, in Florida, and yet the largest merchant in that town sends regularly to New York for his stock of bottled extracted honey! This speaks for itself.) E. G. B.

Lotus Glaber

Some time ago Mr. John Lefler of Mentone, Cal. sent us a specimen of a honey-producing plant, of great value with him, but whose name he did not know. He says: "I do not know the name of the plant I send you. It is commonly called 'Mountain Alfalfa' here. It is one of the minor honey plants of California, and never a very heavy yielder of nectar. It seems to grow best on sandy,

gravelly soil, in dry washes next to the river, where nothing else will grow well. It comes up on ground that has been burned over. It is a triennial, then dies. The plant somewhat resembles the Alfalfa, but the leaves are smaller and of a lighter shade of green. It is worthless as a foliage plant, as the stalks, though fine, are tough and woody. Where it has water, it grows the year 'round, but where it is dependent on the rainfall, it dries up and drops its leaves about the first of July after maturing its seed crop. Then the stalks change in color from green to a reddish tint. It is this plant that gives the hue to wide areas of our plains and hills at this season of the year." (We find that the plant sent us is the "Lotus Glaber" that is called Wild Alfalfa, also Deer Clover, also Wild Broom (Greene). It is common everywhere in the foothills of the coast ranges, southward to southern California. You will find this briefly mentioned on page 360, of the last edition of The A B C and X Y Z of Beekeeping, friend Lefler. For the different local names I am indebted to Mr. P. L. Ricker, Assistant Botanist of the Bureau of Plant Industry, Washington, D. C.) E. G. B.

A Misunderstanding

The closing line of our editorial on page 406, November issue Review, it seems, is misunderstood by one reader, at least. We are in receipt of a letter from Mr. Ernest Skelter, of Clare, Mich., which makes us fear he has also misunderstood our whole attitude in that article, which referred to "Maeterlink as a Farmhand." Mr. Skelter concludes that the expression "The War God" means the Kaiser. Nothing of the kind, friend Skelter. We mean "Mars, the God of War," war personified. If you will read the article over again, you will see that there is no attitude of judgment, one way or the other, on the terrible war now raging, no censure or commendation, only a deploring of war's horrors; and **that all must deplore**. We might state further, for fear that others may have been inferring wrongly about our attitude from a misunderstanding similar to our friend just named, that we have studied German since a boy, have taught German for several years, have studied German at Heidelberg and Goettingen, Germany, and that my "help-meet," the **heart of our home**, is German and speaks excellent "Deutsch." And we often speak German in our home talk. Now, friend Skelter, do you think I would likely say anything to "hurt the feelings of any German"? Guess again! But we are not discussing the war situation in a Bee Magazine, one way or the other. —E. G. B.

The Last of Our Bees Removed from Cellar March 11-12

We reported last month removing a part of our bees from the cellar in February. They were papered in tar paper and are apparently in good shape to date.

The balance of our cellar wintered bees were removed from the cellar on March 11-12, this being a warm period, and they have had a fine fly and we are sure they will be allright from now on outside.

Out of some over 200 swarms put into the cellar last fall, all were removed alive, excepting five. Four of those were queenless so early last fall that they had bees so old that died of old age before spring, and one starved, outright, being overlooked when we fed last fall. As we told you last month, many of these swarms we put into the cellar were somewhat weak in bees, and nearly all were short of winter stores, were the cull swarms from eight yards drawn home to feed up and winter in the cellar.

We do not expect to carry this number clear through to the honey season, as some will be found queenless, others too weak in bees to be profitably kept, so they will be united, and after we are through handling them, and pronounce them ready for the harvest, this number will be a considerably reduced. Quite likely there will be a 20 per cent reduction in number between now and the 10th of June, when we may reasonably expect our main honey flow to begin from clover.

Mr. John Lefler, of the Redlands district, Cal., sends us the answer to our inquiry in the editorial page 367, in the brackets "The trees bloomed much earlier than usual," and we asked "Do you mean 1913," to which Mr. Lefler replies "The words 'this season' should be inserted there." This will make the matter clear. Thanks, friend Lefler.—E. G. B.

Two dollars pays your local, or affiliated association dues, your National dues, and a year's subscription to the official organ, THE BEEKEEPERS' REVIEW. Send two dollars, no more, no less. This remittance can be sent your local secretary, whose address will be found on page 142 of this number of the Review, or Sec. Wesley Foster, Boulder, Colorado, or if more convenient, it can be sent to this office.

Management of Three Thousand Colonies Bees in Fifty Yards

J. J. WILDER, Cordele, Ga.

It is not such a hard matter to work up to a well planned business ahead as it is to plan and work along together. Right here is where success or failure lies, but I know that our greatest promoters or writers advocate this way of procedure. That is, just try it and see how you will succeed, but the way to succeed is to plan well on ahead and work up to the plans and this means something definite to plan to, that is a stake set up at the other end or highest point of the venture; then with this in view plan and work and not grope along in darkness. I know that a man not so well experienced will get side-tracked a little, but he is quick to discover it and is rather profited by it in the long run.

With all the turning points and the limit of my bee business clearly in my mind, the task has not been as great for me as one might think. Mr. Hutchinson once said that it was folly for a man who could plan well to do the work, too, but just stand by, study and offer suggestions and see that it was done right. This is true when a business is well under way, but until then the proprietor better work and think, too. At first his services, as a rule, have to be divided between his bee business and some other man's business and in this way he is almost on double duty all the time. Also Mr. Hutchinson said that "More Bees" were better for a beekeeper than to mix up with some other line of business. This is a wise thing to do, but it is limited to the man who can do it, time and means permitting, but void of means an energetic man must bring his other business props into play and do this until he well knows he has passed over the danger line of his bee business, and if he was to drop the other line too soon he would naturally have drawn too heavily on his weak business and thereby crippled it, when he would become discouraged and perhaps abandon it entirely. I could have safely dropped the "prop" at the 200 colony mark and I believe any beekeeper could and solely depend on returns from them for all the common necessities of life, but this number is right at the bottom of the limit, for no outside investments could be made and possibly in many cases economy would have to be practiced more than it should until the number of colonies was raised. Then if a large bee business was in view the returns would be drawn on too heavily until it would be years before the limit would be reached.

When I let go my "prop" by which I made my entire living, I had over 300 colonies in 5 yards and with such a good start I was able to keep living expenses paid and the business moving. Mr. Hutchinson said "Borrow capital and go into the bee business with it." Of course, this would mean to draw on the bees for your entire living expenses and interest on the borrowed money, also the principal, and we all know such a thing would be the limit. While it could be done, no doubt, in some cases, it would be a better thing if borrowing were to be resorted to, to get only small amounts along when it could best be used for sure and quick returns, but nothing could be better than some other good vocation as a means of livelihood and let the bees pay their own way through.

Now, let us look at the labor problem just a little, for this is nearly all the time a hindrance in some way. First and last, I have worked hundreds of helpers in my business and I have had some very bitter experiences along this line, both with the experienced help as it has come to me from time to time, and the inexperienced or raw help. As to this raw help you take and school as you want. I must say it is most reliable and in some ways more satisfactory, but it is sometimes the case where you have trained it as you think sufficient to begin to lay some obligations on it, for it seems to be trustworthy in every way, and you trust a portion of your business solely in its care, no sooner than you do so he will fall down on you fairly and squarely and great is your loss. At different times I had well trained three helpers and thought I could trust them, which I did, the result being as follows: One working for salary and trusted with the care of 300 colonies resulted in a complete failure when it was too late. The bees were never supered, no supers prepared for them or even the apiaries visited more than once during the season. The bees swarmed and reswarmed and had their own way. And in this case his wife was the direct cause of his failure. In another case a young man did me the same way with about the same number of colonies. While he was directly under my care he was the most timid young man I ever saw among the ladies. He would even blush when he met one on the sidewalk. No sooner than I trusted him off he decided to get married and every young lady in the whole country had his attention in the new field where he went to take charge, and I at last, but too late, discovered this, but I was congratulated by his boarding mistress for having the most popular young man in that entire country in charge of my business at that place.

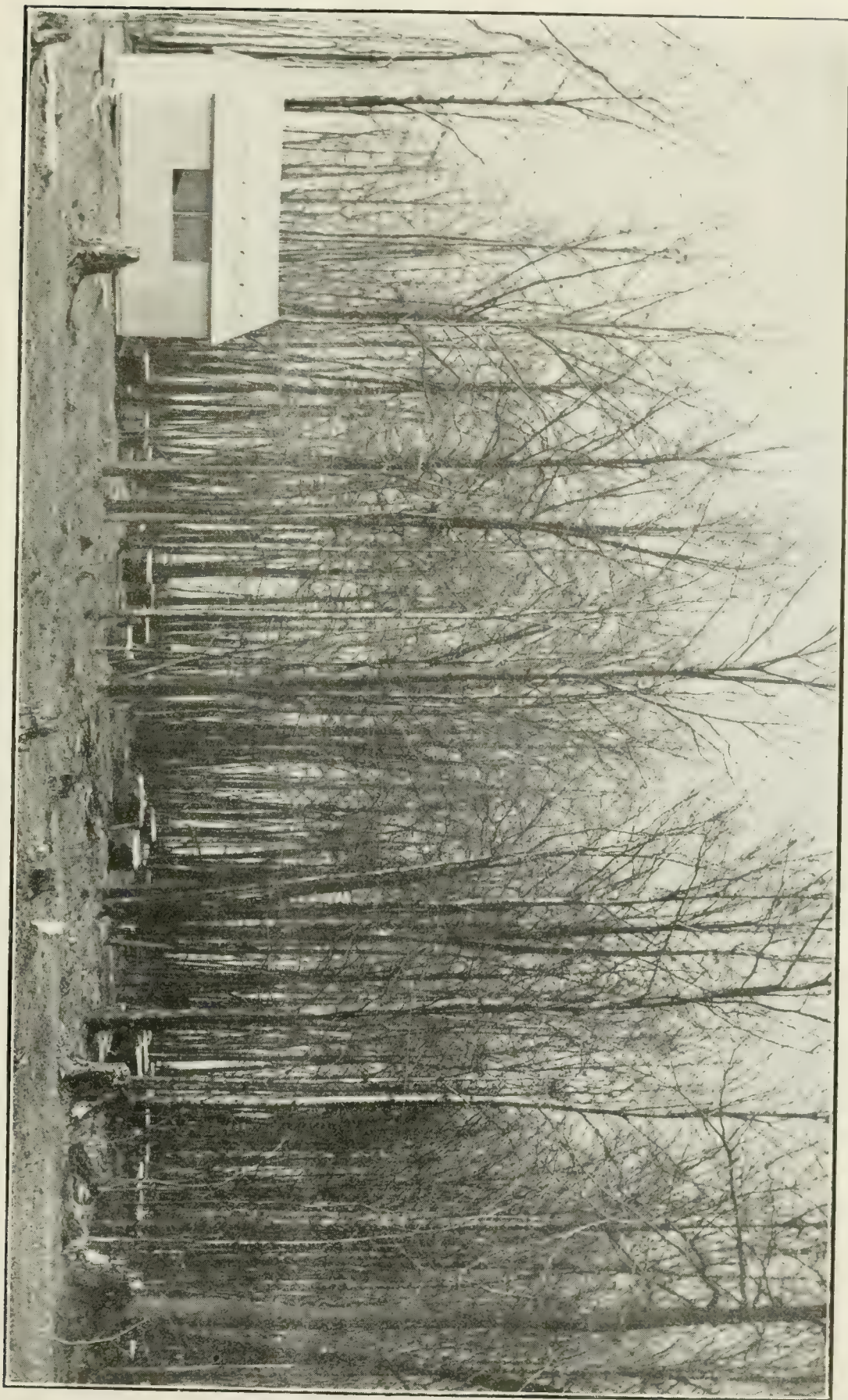
Another helper got married without my knowledge shortly after he took charge of one branch of my business and of course

I could not expect anything of that poor fellow but failure, but several of his neighbors told me when I made investigation that he started out to the bee yards several times when his new wife would cry to him as he would start and say, "If you like Wilder's bees better than you love me, go out and stay with them, but be sure you don't come back when you do," and of course he would immediately return with a broken heart and tears streaming from his eyes.

I mention this because the best help obtainable will do likewise and therefore you can't trust it too far. You must watch it or have it done by a trusted overseer.

No experienced help that has ever come to me from time to time has remained with me long. In the first place, they wanted far more for their services than they were worth to me or I could afford to pay. The next thing their ideas about certain work would not run the same way mine did and to do as I said work had to be done was totally out of the question with them and when they were fully awakened to the fact that the business under their direction was fast drifting into a failure they would many times quit before they would change their already set or fixed ideas. Many would come under this agreement: "I will do the work just as you say it must be or follow your instructions fully," but no one has ever yet complied fully with this promise. The fact remains that qualified apiarists are in businesses of their own and those out for the services of others are not our best apiarists and in the truest sense of the word can't be depended upon as all-around men.

The best way I have found to use labor is to let bees out on shares to those whom I have schooled or trained in the bee work who have proven to be energetic and trustworthy and fully qualified for the work. This allows such apiarists a chance to make more than ordinary wages and they will, as a rule, do it and get very enthusiastic over the business intrusted to their care and more and more bees is their desire. In this way the business must progress, which means greater business and returns. Such apiarists can very often handle labor to great advantage and this will enable them to successfully carry on a good sized business. In such cases apiarists are not allowed to have bees of their own or any other business or job. Keeping bees on shares for me is their sole occupation and their part or share is one-half of the honey and wax. All increase is mine and in no case is decrease allowed, spring counting. But if so much increase is made as to affect the honey crops, I pay them from 50 cents to \$1.00 per colony, depending upon amount of increase.



The Welch Yard

One of the Eleven Yards Owned and Operated by E. D. Townsend & Sons, Northstar, Mich.

The "Booster's Club"

GEORGE W. WILLIAMS, Redkey, Indiana

BE A BOOSTER

If you see some feller tryin,
 For to make some project go,
 You can boost it up a trifle;
 That's your cue to let him know
 That you're not a-goin' to knock it,
 Just because it ain't your "shout,"
 But you're goin' to boost a little
 'Cause he's got "the best thing out."

If you know some feller's failin's,
 Just forget 'em 'cause you know
 That same feller's got some good points,
 And them's the ones you want to show;
 "Cast you bread upon the waters"
 They'll come back—'s a sayin' true.
 Maybe they will come back "battered,"
 When some feller boosts for you.—Anon.

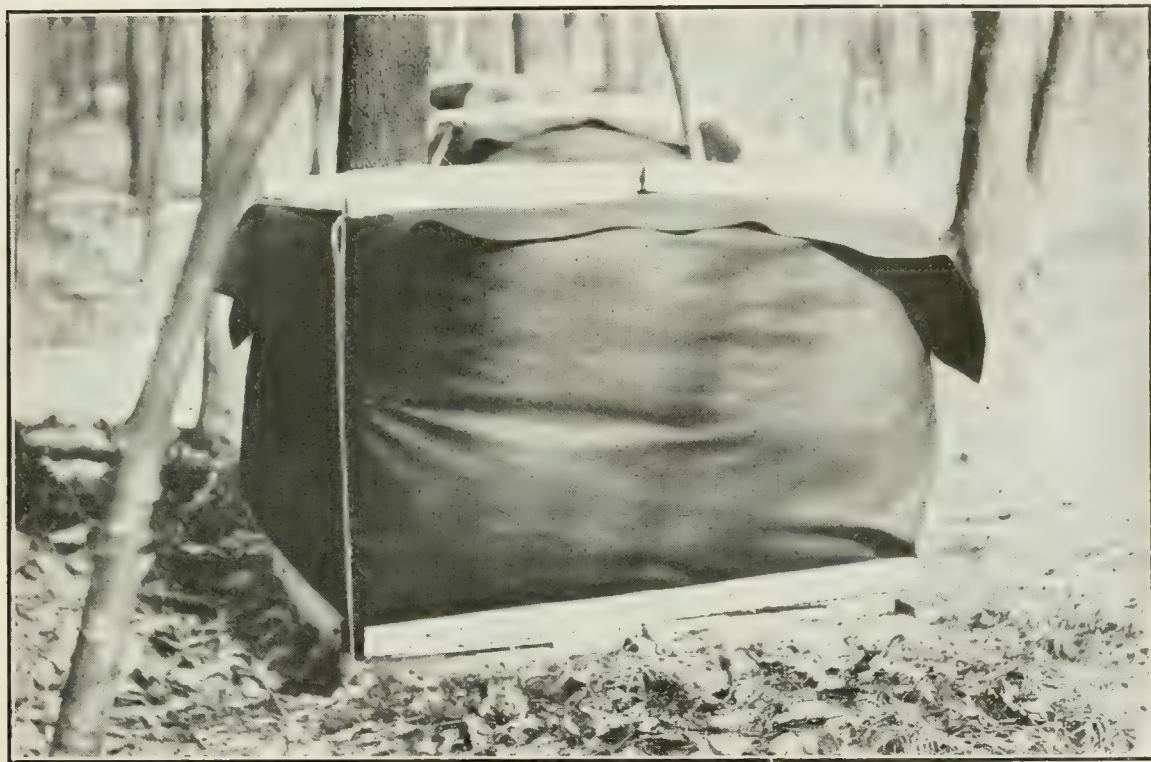
I wish to announce that the Beekeepers of the United States will proceed to organize a "Booster's Club of America."

Every beekeeper is invited to join and bring in his neighbors. The dues will be left to the free will of each member. All thousand dollar bills sent for dues must have a revenue stamp attached, or they will be returned for correction. No sums received, with our knowledge, less than a penny postage stamp. Every member must contribute something, if not more than his honest opinion. Contributions to this department will be paid for in honor and reputation. The less words, the greater the reputation. We are out for bigger and better business, but we will have some fun along with the business. When we get a little older, we will sentence some sucker to be "Booster-in-Chief" with assistant boosters in each state, and 2nd assistant boosters in every county. Then we can boost. The name "Booster's Club" fits the requirements, but if it causes any finicky bee doctor or lawyer to have "fits," we will take a change of venue and stand trial under some other name that smells sweeter. We are not particular about it, we can be sentenced under any other alias just as well. I have been compelled by force of circumstances to fill the pulpit and give you the following sermon. It is every word of it true, and

then some. If it does not fill you with the fear of the hereafter, this place is open to anybody who can. I expect to have help next month. I will ask somebody to pass the hat. After all have contributed, we will adjourn for thirty days.

Honey Advertising

There was no subject discussed at the National Convention that received more earnest consideration than that of increasing the demand for honey.



A Group of Two Colonies Wintering in Tarred Paper Packing at the Welch Yard

It was shown that the European war had closed the market for the honey from California, Canada, Cuba, South America and the West Indies. As California has formerly sent 150 to 200 carloads to Europe in former years, and these other countries enormous quantities of the cheaper grades to Germany, France, and the other war-ridden districts, and this honey is now being thrown on our already congested markets, the situation is alarming. And this condition is liable to continue for years, as these stricken people will not be able to buy sufficient bread, let alone honey to eat on it for a long time to come. To aggravate matters, our own business affairs have got into a bad condition, so that our own people are not buying as freely as they usually do.

All this makes "A condition, not a theory." If we allow it to continue, the honey business will go to smash.

Can We Remedy the Conditions?

Can we market our own normal production, and absorb the California surplus, and the immense imports that are being thrown into this market without suffering a severe decline in price and a demoralized market? I believe we can, and I am not alone in this belief. To do this, we will have to increase the consumption of honey about 20 per cent. There is not a local beekeeper in the country who can not do this in his own neighborhood, and do it easily. He can easily sell all his own honey, and then buy as much more of some of his less fortunately situated neighbors, and help swell the aggregate. There is no grocer who with a little encouragement can not sell twice the usual amount. There is no woman or man out of a job who can not make a nice living from a honey route in their own town. It will be our business to set the machinery in motion to bring about these things.

As the National has decided that it can do more good in promoting the educational and scientific phases of the business, and the National Honey Exchange is not quite ready to take this on, as nothing better offers just now, I have been asked to volunteer my services in arranging a campaign for this purpose. This is a pretty big undertaking, with no money, no organization to stand sponsor for it. However, I am going to tackle it, and get it started, and when it gets too big for me to handle, I will willingly turn it over to some abler man to finish. This is a matter that requires the co-operation of a majority of the honey producers of the country. No one man's job, nor any one organization job, but a union of all.

Shall We Form a "Booster's Club?"

We want the active help and co-operation of every producer in the United States. We will enroll every person who wishes to assist, and as some sort of an organization is necessary, we will elect directors and a vice president in every state to carry out and enlarge the sphere of usefulness of the "club." This must be done rapidly. I want every producer who reads this to sit right down and forward his enrollment. There can be no fees or dues except voluntary contributions. There will be matters coming up that will require voting to decide. It has been suggested that one vote be allowed for each dollar contributed to any of the funds called for.

Advertising a Necessary Item of Expense in Legitimate Business

Advertising is not charity, or a donation to some worthy cause. It is a purely business investment, as truly as your sections or your cans are a legitimate item of expense. All business firms devote a given per cent of their gross income to publicity, some, like patent medicines as high as 80 per cent. We need but a small percentage of the income of honey to make the business "boom." If we pursue a "penny wise" course, and allow things to drift, we will see our beloved business ruined in the near future. I wish I could say the right thing to induce every one of my readers to realize the grave condition that confronts us, and have every one to assist to the extent of his ability. It is not a matter of sentiment alone, it is the most serious kind of business. We must get relief, or quit business. Will you join us in attempting to remedy matters?

The First Steps

The first thing to do is to get together in some plans for immediate action. We have 100,000 beekeepers in the United States, and they are the most "persistent" inventors in the world, when it comes to inventing traps around a bee hive. To direct this tremendous ingenuity into more practical channels, and put it to direct use, we want to raise a fund of \$50.00 to offer as a premium to those who will perfect the three best plans for relieving the present condition, to be divided into three parts of \$25.00, \$15.00 and \$10.00; the results to be decided by a board of judges consisting of E. D. Townsend, Prof. Jager, and Wesley Foster. You may send subscriptions to this fund to me and they will be announced in the Review.

The Grocery Trade

A large part of the honey, especially the comb honey is sold through the groceries. Even at that, only a small per cent of the retail groceries handle it. We want to get closer in touch with them and interest them more and more with honey as a desirable commodity. This will be done by form letters, advertising in the trade journals, and by special correspondence. These fellows are in the grocery business to make money. If we can show them that honey is a desirable and profitable article for them to sell, they will push it for us. They can easily double their present output with the proper encouragement. Let's make this fund large enough to reach every grocer in the United States every month with a good strong letter. It will take quite a little fund. I will start it off with \$5.00, which is 5c for each colony I have.

Each subscription will be published in the Review.

Display Advertising Cards

Did you ever notice that all other food products sold in the groceries were flanked by attractive placards and notices calling attention to their merits? With the exception of the Air Line of honey, I have never seen a placard displayed, and I have looked for them in hundreds of groceries. Ernest Root assured us at the National Convention that these placards increased the sales of honey fully 100 per cent. Do you see what a great "booster" we have been overlooking, and one that we can be assured will help us sell our own individual honey? Every case of honey prepared for market should have one of these cartons placed in it, ready for the retailer to tack it up. There is nothing that will bring the immediate returns that this will.

The one I have selected is a Teddy Bear carton, full of comedy and action, depicting the pranks of a mischievous young Teddy Bear who leads his mates into all sorts of scrapes in their attempts to "EAT HONEY." They will be printed in two colors, on heavy card board, and are very attractive. They will be a great help in selling. I will book orders in lots of 100 to 500 for 2c each; over 500 1½c each.

There are other ways to "boost" honey, and it will be the business of this department to publish all the good ones submitted. Any plan is a good plan that will sell more honey, or cause more people to want to eat more of it. Every pound of honey that I sell for my neighbor helps the honey market generally. Every pound that goes unsold, depreciates the entire crop tenfold. It is the small surplus that determines the price. Help your neighbor and boost the price of your own crop. Do not be narrow, sell to the limit of your market, and incidentally establish a honey route that will maintain you in comfort whether you raise a crop of honey or not.

Queens Killed by Kindness

O. J. JONES, Urbana Ohio

Unnecessary Handling of Bee Out of Season Not Advisable. A Queen-Clipping Experience Most Beginners Go Through

I had a new experience a year ago this month (April) while clipping my Queens. It has been a puzzle to me ever since, and is

yet. It is my custom to exchange bottom boards in the spring when I make my first round, also to clip queens. It was during this round I had the following experience:

The queen was found on the third frame and so you will understand the circumstances better, I will describe my method of clipping. The queen is always picked up by the wings, letting her catch with her feet on end of my index finger of left hand, when I clip her right wing. She is now picked up by her left wing and carefully placed on top of frames that have been looked over. In this case I looked through the hive and made record, closed it up, lifted it from hive stand, put in its place a clean bottom board. I loosened hive from old bottom board and set it on clean bottom where it originally set. With this done I saw on old bottom board a ball of bees and found upon smoking them off, their own queen—dead. I wonder if others have lost queens at clipping time not knowing what became of them (as I should not have known had I not changed bottom boards). Another experience: Last June, after having this experience, I clipped another young queen. As I placed her on top of the frames I noticed the bees acted rather strange, and thought best to look after the queen. I found her “balled,” smoked the bees off and caged the queen until the next day, when she was released and is still with her swarm.

Since that time to avoid such loss the queen is put back upon the frame she is taken from, while it is still out of the hive.

Yesterday (April 25th), while at this same work, in one case the bees “pounced upon” one queen very angrily, but soon quieted down, as there were not many bees on the frame.

Has anyone else had such an experience, or is it because I work bare-handed and carry the odor from one hive to the next?

(Friend Jones is going through an experience most beginners go through. He is so enthusiastically interested in his bees that it is impossible for him to let them alone **out of season**. It is those very enthusiastic beekeepers who eventually make our most successful honey producers, so I would not discourage the handling of bees **at any time for experimental purposes**. If bees are handled during the spring months, **when no honey is coming in from natural sources**, it ought not be on a large scale, just a few colonies to see how they are coming along.

In the northern or cold portion of the States and Canada, bees better be left entirely alone during April. See to it the previous fall that they have an abundance of stores to last them until the main honey flow is on the next June, then let them entirely alone, for by so doing you will do the bees a kindness, save one's self a

lot of work one cannot expect pay for and in the end your pocket-book will be swollen out larger.

Now, friend Jones, you have had experience enough along the line of spring handling of bees to be in a position to understand that something is wrong with your management, as experienced beekeepers do not have this trouble you are having to any considerable extent. Now for the remedy: I could tell you many reasons why you should allow your bees to do their own house-cleaning in spring, but space forbids. At any rate, do not molest the bottom boards of your hives this spring.

Do not molest the bees at all until early in May in your location, or **during a period of good weather when there is honey coming in.** The most favorable period to clip queens, or do any **spring work** with the bees requiring the removal of brood-frames, is during fruit bloom. Even then, if we do not want our queens "balled" and the consequent loss, do not clip queens or similar work unless the weather is good so the bees can fly and gather some honey from natural sources, and you will be surprised how good natured the bees are to their queen.)

Southern Conference For Education and Industry Chattanooga, April 27 - 30, 1915

If the promoters realize their expectations, this will be a conference of considerable importance. To give the reader some idea of the scope of this conference, we quote at random, some of the committees: (2) Committee on Social Purpose and Studies; (3) Committee on Industrial Training; (4) Committee on Co-operation between Universities and Industries; (5) Committee on Agricultural Education; (7) Committee on the Education of Teachers, etc. The following is the Conference on Bee Culture, which interests us more particularly:

This Conference will have unusual value for Teachers, especially in Town and Country Schools. The programs will set forth: (1) Ways and Means for Studying the Life History of the Bee; (2) The Most Effective Method of Culture; (3) The Co-operative Effort Necessary for the Community Industry. It will be shown further how the study of the Bee can be made a regular part of the Public School work, using this as a means for enlisting and preparing the pupils for a lifelong study of Insect Life in general.

The Chairman of the Conference, Dr. E. F. Phillips, of the Bureau of Entomology, is possibly the greatest authority on Bee Culture in this country. Different phases on the subject will be

handled by other experts, including both noted Entomologists and Beekeepers.

March 10, 1915.

Mr. E. D. Townsend,
North Star, Michigan.

Dear Mr. Townsend:

The Southern Conference for Education and Industry will hold its annual meeting at Chattanooga, Tennessee, on April 27-30. In connection with this conference there will be a number of smaller conferences on various subjects of interest in the south. One of these will be on beekeeping. The general meetings are held in the morning and evening and the smaller conferences in the afternoons.

In connection with the beekeeping meetings, it is proposed to devote the afternoon to a discussion with farm demonstrators and teachers. The second and third afternoons (April 28-29) will be devoted to a beekeepers' conference to which all beekeepers are cordially invited. A number of prominent southern beekeepers will be present and these meetings promise to be most helpful. As soon as a definite program can be announced a copy will be sent you. In the morning previous to the meetings of the general conference there will be a two hour question box meeting.

It is hoped that some instructive exhibits can be arranged as well as some practical demonstrations. A room has been assigned to the beekeepers conference for this purpose.

Very truly yours,

F. E. PHILLIPS,

In charge Bee Culture Investigations.

Twenty-Fourth Annual Meeting of the Connecticut Beekeepers' Association
Saturday, April 17, 1915

In the Old Supreme Court Room (3rd floor West side) State Capitol, Hartford, Conn.
Sessions 10-30 a. m. and 1.30 p. m.

Morning—Reports of officers and committees, election of officers, appointment of committees, collection of dues, new business. The program committee announces the following attractive program to be presented by some of our experienced and best known members.

"Bee-keeping on the Farm Fifty Years Ago," Dr. T. L. Scranton.

Dr. Scranton is our oldest member and has kept bees for more than 60 years. His address promises to be very interesting.

"Bulk Comb Honey," Allen Latham.

"Best Way to Secure it in Connecticut."

"Best Way to Strain It."

"Best Way to Market It."

Recess for Lunch

Afternoon—"Some Things I Have Learned in Keeping Bees," Geo. H. Yale.

Mr. Yale was the third president of our association and his experience covers a long term of years.

"How I Cure Foul Brood and Dr. Miller's Method," A. W. Yates.

Question Box if time permits.

An invitation is extended to all Beekeepers to attend this meeting. Ladies will be especially welcomed. Each member is urged to secure at least one new member. Our Association was never in a more prosperous condition than at present. The advantages of membership are so pronounced that no progressive beekeeper can afford to remain outside. A larger society means greater benefit to the individual. You have friends who do not belong, get them to come in. Dues \$1 per year. Members receive free one of the best Bee journals published, also a liberal discount on bee supplies from the best houses.

L. WAYNE ADAMS, Sec'y.

15 Warner Street, Hartford, Conn.

The National Beekeepers' Association Inc. And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
.....Amherst, Mass.
FRANK C. PELLETT, Vice Pres....
.....Atlantic, Iowa
WESLEY FOSTER, Sec-Treasurer..
.....Boulder, Colorado

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E. G. CARR.....New Egypt, N. J.
GEORGE W. WILLIAMS..Redkey, Ind.
J. H. STONEMAN....Blackfoot, Idaho.
E. J. BAXTER.....Nauvoo, Illinois.

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE....
.....G. M. Frizzell, Temple, Ariz.
ADIRONDACK—H. E. Gray.....
.....Fort Edward, N. Y.
COLORADO—Wesley Foster.....
.....Boulder, Colo.
CHICAGO NORTHWESTERN—E. H.
Bruner, 3836 N. 44th. Ave.,
Chicago, Ill.
HAMPSHIRE—HAMPDEN—FRANKLIN
Dr. Burton N. Gates, Amherst, Mass.
TWIN FALLS—C. H. Stinson.....
.....Twin Falls, Ida.
IDAHO HONEY PRODUCERS' ASS'N—
F. C. Bowman.....Idaho Falls.
IDAHO—OREGON HONEY PRODUC-
ERS' ASS'N INC.—P. S. Farrell,
.....New Plymouth, Idaho.
ILLINOIS—Jas. A. Stone.....
.....Rt. 4, Springfield, Ill.
INDIANA—Geo. W. Williams.....
.....Redkey, Ind.
IOWA—S. W. Snyder, Center Point, Ia.
KANSAS—O. A. Keen, Topeka, Kansas.
MASS. SOCIETY OF BEEKEEPERS
(Eastern) Benjamin P. Sands, 1051
Old S. Bldg., Boston.
MONTANA—Percy F. Kolb, 134 Broad-
water Ave., Billings.
MICHIGAN—F. E. Millen, East Lansing.
MINNESOTA—F. W. Ray, Minneapolis,
Minn.

MISSOURI APICULTURAL SOCIETY
INC.—Austin D. Wolfe.....Parksville.
NEW JERSEY—E. G. Carr.....
.....New Egypt, N. J.
N. CALIFORNIA—Alwin P. Heim..
.....16, Fair Oaks, Calif.
N. MICHIGAN—Ira D. Bartlett....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola, Ohio.
OREGON—Floyd E. Smith, Dallads, Ore.
THE NEW MEXICO BRANCH—
Henry C. Barron, Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger..
.....Liverpool, Pa.
PUERTO RICO—J. W. VanLeenhoff
Ponce, Puerto Rico, 11 Marina, Ct.
SOUTH IDAHO AND EAST OREGON—
R. D. Bradshaw.....Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—H. E. Graham, Gause, Texas.
VERMONT—P. E. Crane.....
.....Middlebury, Vt.
VINTON BEE-KEEPERS' ASS'N—..
.....E. J. Winder, Vernal, Utah.
WASHINGTON—S. King Clover, R. No.
1, Mabton, Wash.
WISCONSIN—Gus Dittmer....
.....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

National Beekeepers' Association Convention Denver, Colorado, February 16 -18, 1915

WESLEY FOSTER, Boulder, Colorado

The National Beekeepers' Association Convention has come and gone. It was a short three days for us all, every minute crammed full of business. Beekeepers began arriving Monday, February 15th, and Monday evening a score and more of beemen were visiting and exchanging experiences in the lobby of the hotel. These visits with each other swapping yarns are exceedingly enjoyable and profitable.

Tuesday morning, the exhibits in the Exhibition Hall were all in place and in full operation. The writer has attended three National Conventions, and no such extensive or well managed ex-

hibits have been shown. Honey demonstrations (with honey served on hot biscuits) were in operation almost continually. Hot coffee was also served while exhibits were open.

When the first session opened, twenty affiliated associations were represented by delegates. Attendance at the public sessions were from seventy-five to one hundred and fifty.

The Colorado Honey Producers' Association had the store and office at 1428 Market Street beautifully decorated, and the beemen enjoyed visiting the establishment.

One of the main difficulties was in finding time for the reading of all the papers. Too many were presented and there was not time enough for discussion. A radical change should be made in the make-up of future programs. Too many papers on marketing and co-operation were presented, although it was evident that these subjects are live ones.

The business sessions were characterized by some flurries that at times seemed destined to become wrecking to the organization, but most differences were adjusted before the end of the convention. The incorporation of the National drew out the most of the trouble.

The address by Mr. E. R. Root "Migratory Beekeeping," was excellent and while he had no great success to report, was still interested enough in the proposition to continue trying. Mr. Hersperger, of Ordway, related his successful experience in moving bees from Ordway, Colorado, to Arkansas and back again.

Mr. Grover Matthews, of California and Idaho, gave some of his experiences in moving bees between those two states.

The paper on "Marketing Honey," by John C. Bull emphasized the point of maintaining the price on honey by selling direct to the consumer. Mr. Bull has followed this plan very successfully in Indiana.

Dr. Phillips' paper on "The Development of the Honey Market" really dealt with the obstacles in the way of co-operation. Dr. Phillips' paper was a well arranged presentation of the subject by one who has had to draw all of his facts from observation rather than experience. If Dr. Phillips was an actual commercial producer, he would have endeavored to also point a way as well as herald the pitfalls. Dr. Phillips said that the true friend of co-operation would frown upon any co-operative venture foredoomed to failure. If Dr. Phillips' advice had been followed prior to the organization of the western honey associations now in existence, they would never have been formed. The main feature of his paper was the insistence that co-operation has to grow from the

bottom up and not from the top down. His division of the United States into honey producing divisions was good and his statement that these divisions are now competing is correct, but his intimation that they cannot co-operate will hardly be borne out by the facts, for they have co-operated to a certain extent already.

If a honey buyer can gather the honey together from these varying districts, blend it and sell it upon the large markets, the co-operative association can do the same thing. A well organized association can do anything that a private individual or corporation can.

One of the desirable features of the Convention was the placing of the exhibits in a store room of the hotel by themselves. The disturbance to the public sessions was thus avoided.

The Colorado Honey Producers' Association had charge of the display of G. B. Lewis Company's goods, Dadant & Son's, and The American Can Co. The C. S. Morey Mercantile Company served coffee, and the serving of honey on hot biscuits was a feature provided by the Colorado Honey Producers' Association. Through the efforts of Mr. Frank Rauchfuss, the exhibits were beautifully arranged and the front of the exhibit room decorated.

The social evening Tuesday, between the hours of nine and ten-thirty, was enjoyed by all. Music was furnished by the Auditorium Orchestra. Punch, oranges and Colorado Jonathan apples were served, and a general good social time was had.

The banquet furnished by the Colorado Honey Producers' Association Wednesday evening was a delightful affair, one hundred sitting down to the seven course supper.

The menu card is given on opposite page.

The following officers were elected:

President—Burton N. Gates.

Vice President—Frank C. Pellett.

Secretary-Treasurer—Wesley Foster.

Board of Directors:

George W. Williams, E. G. Carr (hold over).

J. H. Stoneman, E. J. Baxter, E. D. Townsend (elected).

Mancelona, Mich..

Mr. E. D. Townsend,

Dear Sir: I was surprised to see my name in the list of those having honey for sale. I know I reported having honey for outside market but really did not intend to ask you to list me as I had so small an amount.

It is all sold so I expect my name ought to be removed.

I thank you however for listing me.

Yours truly,

E. A. STODDARD.

Advertise it in the REVIEW and get results.

O, my Hon, look here, look here!
 Ain't you glad you have a Bee
 Buzzin' round so busily,
 Makin' honey all the time,
 To keep us sweet through rain or shine.

National Beekeepers' Convention

Banquet

Auditorium Hotel, 1915.

Menu

Grapefruit

Sweetened with Colorado Honey

Pickles Olives Radishes Pascal Celery

This is a sample of Colorado's Famous Pascal Celery raised by Wallick Bros. near Denver, who are members of the Colorado Honey Producers' Ass'n. They raise large quantities of celery, producing from \$300 to \$500 per acre.

Cream of Colorado Tomatoes

Fried Trout, Saratoga Chips and Tomato Sauce

Colorado's Mountain Streams are known throughout the world for Trout Fishing.

Turkey with Dressing and Cranberry Sauce

The Poultry Industry has doubled the past two years in Colorado.

Mashed Potatoes

Empson Peas

The average U. S. yield is 91 Bushels per acre. Our famous Burbanks on Sweet's large ranch have averaged a little over 500 bushels for the past four years

Fruit Salad

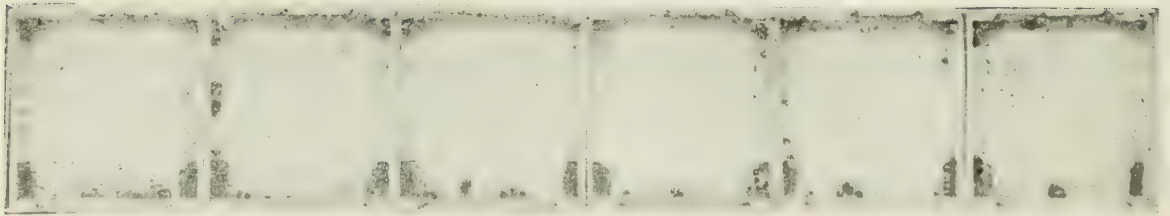
Almost like mushroom growth, Colorado has sprung up into a great fruit empire. The Jonathan apples on the table are from the Hillside Orchard near Grand Junction, owned by Mrs. J. Stark. She received \$1,825 worth of these apples from one acre.

Ice Cream with Cake

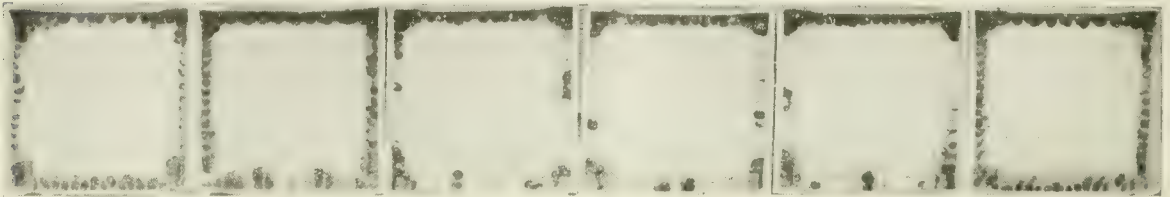
Honey Cereal Coffee

This Cereal Coffee is invented by W. L. Porter of 3522 Alcott Street, Denver

The Butter used on the table is from the Farmers' Co-Operative Creameries. 7 new Creameries have been built within the last few months. One of these men said that six years ago there were 12 silos in the state and that today there are 1,200



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, comb and cappings white, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

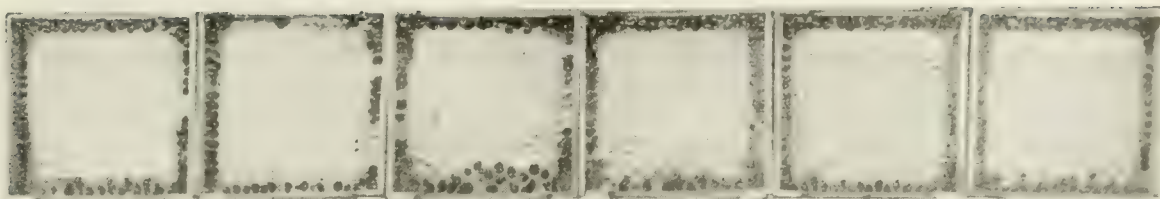
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

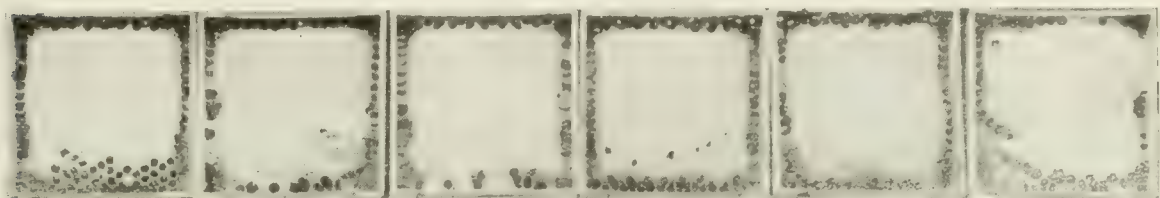
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

COMB HONEY

Fancy:

Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than $12\frac{1}{2}$ oz. net, or $13\frac{1}{2}$ oz. gross. The top of each section in this grade must be stamped, "Net weight not less than $12\frac{1}{2}$ oz."

The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number One:

Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber in color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number Two:

This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES

Honey packed in second hand cases.
Honey in badly stained or mildewed sections.

Honey showing signs of granulation.
Leaking, injured or patched up sections.

Sections containing honey dew.
Sections with more than 50 uncapped cells, or a less number of empty cells.

Sections weighing less than the minimum weight.

All of such honey should be disposed of in the home market.

EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W", "L. A.", "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES

Extracted honey packed in second hand cans.

Unripe or fermenting honey, weighing less than 12 lbs. per gallon.

Honey contaminated by excessive use of smoke.

Honey contaminated by honey dew.

Honey not properly strained.

Beekeepers' Convention and Official Apiary Inspectors' Conference

Massachusetts Agricultural College, Farmers' Week, March 15, 16, 17, Has Been Postponed

On account of the continued prevalence of the foot and mouth disease, there being some 64 towns in Massachusetts under quarantine, the Trustees of the Massachusetts Agricultural College after conference with the State Department of Animal Industry, and on their advice, have decided to cancel all Farmers' Week programs which were scheduled for March 15-19. This includes the cancellation of the Beekeepers' Convention.

The second convention of the Apiary Inspectors' Association of Eastern United States, scheduled for March 17, has been temporarily postponed, also, with the recommendation of Hon. Wilfred Wheeler, Secretary of the State Board of Agriculture under whose auspices this Conference was to have been held.

A subsequent announcement should appear in this paper. We are informed by Dr. Gates that the program as proposed was assuming more and more importance as the day of the Conference approached. In fact the subjects are of such timely importance and so urgently need immediate consideration, that it seems imminent these discussions should be provided for. It was planned moreover, to arrange for publication at least in part, of these discussions. Watch the bee papers for future announcements. All interested in bee disease problems, of control, causes, experimentation, or any factors needing solution, investigation or discussion are requested to communicate with Dr. Gates.

Dr. Gates would like to hear particularly from any who have a so-called immune race to European foul or who have had experience with immune races. Experiences with treatment of foul brood by the dequeening or requeening methods should also be communicated to him.

National Membership Dues Now \$2.00

What this two dollars gets!

One year's subscription to the official organ—The Beekeepers' Review. \$1.00.

Dues in both National and your Affiliated Association. \$1.00.

Mail \$2, no more or no less, to Sec. Wesley Foster, Boulder, Colo., or to your local secretary, or, if more convenient, to this office.

CHICAGO—The market is not active on either comb or extracted honey. Of the former, there is very little offered and prices remain without material change, ranging from 17c to 18c per lb. for the best grades of white comb, and the ambers are from 2c to 3c per lb. less. Buckwheat 15c to 16c per lb.

Extracted white ranges from 7c to 9c per lb. with ambers at from 6c to 7c per lb., both kinds selling at about 1c per lb. higher in a small way where quality is of the best.

Eeeswax is steady at from 30c to 31c lb.

R. A. BURNETT & CO.
173 W. South Water Street.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON, Ontario, Ore.

FOR SALE—Fancy orange-blossom honey. Send for price list. JAMES McKEE, Riverside, Calif. tf

IF YOU want bees and queens from Louisiana in April send for my price list. H. C. AHLERS, West Bend, Wis.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

FOR SALE—Twelve tons of wild buckwheat and blue curl extracted honey in 60 lb. cans. For particulars and price write M. J. Sain, Hanford, Calif.

FOR SALE—Carload ext. light amber Alfalfa Honey. In June also ext. Orange Blossom Honey. In new 5-gal. tins, 2 per case. Sample 10 cts. Otto Luhdorff, Visalia, Calif.

FOR SALE—Extracted Honey, Basswood and light Amber in 10 lb. pails. Can be sent parcel post. Write for prices. E. E. MOTT, Glenwood, Mich.

FOR SALE—Fine well ripened white clover honey in 60 pound cans. also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. BEEBE, Mosinee, Wis., Route No. 1.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—Extracted honey, light amber flavor similar to Clover and Basswood mixed. Car lots or less in 600 lb. bbl. at 6c per lb. F. O. B. N. Y., Key West or New Orleans, sample 10c. M. E. ENGLE, Herradura, Cuba.

FOR SALE—50,000 pounds light extracted honey, well ripened and mild flavored. Two sixty pound cans to case, 7½ cents by the case. in ten case lots, even seven cents per pound in fifty case lots. Write H. G. QUIRIN, Bellevue, Ohio.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIREs, North Yakima, Wash.

BEEES AND FIXTURES FOR SALE—On account of sickness I must sell about 80 swarms of bees in 8 and 10-frame hives, with all necessary fixtures for the production of both comb and extracted honey. Bees are in fine shape and will sell them at \$4.00 per swarm, and fixtures at a considerable less than cost. If you wish to buy bees and buy them right, address Arthur J. Schultz, Ripon, Wisconsin.

BEEES AND QUEENS

QUINN'S QUEENS OF QUALITY—Grey Caucasians, the long tongued (6.66 m. m.) bee Mendelism does it. Gentlest of all bees. CHAS. W. QUINN, Box 389 Beaumont, Tex.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

FOR SALE—Untested Italian Queens, Howe stock guaranteed pure. Select mated. Ready about June 15th. Send for circular. Price 1, 85c; 6 for \$4.50; \$8.00 per dozen. No foul brood D. G. LITTLE, Hartley, Ia.

GOLDEN, 3 Band and Carniolan queens. Tested, \$1 each; 3 to 6, 95 cts., 6 or more 90 cents each. Untested, 75c., 3 to 6, 70c., 6 or more 65 cents each.
Bees per pound\$1.50
Nuclei per frame 1.50
Ready to go April 1st. Address C. B. EANKSTON, Buffalo, Lion Co., Texas. tf

FOR SALE—A home and 100 swarms of bees in a good location in Michigan at only \$1,000.00 if taken this spring. House alone is insured for this amount, so one can imagine that this is a bargain. Old age the reason for selling. For further particulars address, Old Age, care the Beekeepers' Review, Northstar, Mich.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to Introduce Queens" 15c. "How to Increase," 15c, both 25c. Untested queen \$1.00. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich

A FINE APIARY IN N. MICHIGAN FOR SALE—300 colonies bees with full modern outfit for extracted honey production, in one of the best honey locations in Northern Michigan, with unlimited range for amateur apiaries. Reason for selling poor health and much sickness in my family. Bees are in fine shape, never had foul brood. Address O. H. TOWNSEND, Otsego, Mich.

BEST THREE BANDED ITALIAN QUEENS—June to October, mothers selected from more than 100 colonies and reared in hives running over with bees, according to the latest scientific methods. Every queen a dandy. Satisfaction guaranteed. Each, 75 cents. Per doz. \$7.20. Per hundred \$50.00. Also Bees and Honey J. H. HAUGHEY, Berrien Springs, Mich.

GOLDEN or Three-banded Italian Queens ready the first of April.
 Tested Queens, each\$1.00
 6 or more, each85
 Untested, each75
 6 or more, each65
 Special prices on long orders. Everything guaranteed. I. N. PANKSTON, Buffalo, Texas. tf

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5¾ in. depth supers nailed and painted (220-10 fr. 40- 8 fr. ext. sup. 5¾ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address Wm. McKIBBEN, Ontario, Ore.

500 SAMPLE QUEENS at 40c on first 500 orders. Moore's Strain Leather Covered Italians. Write for particulars and prices in quantity. April and May orders booked now on 10 per cent deposit. Orders filled promptly, or notice given when such deliveries can be made. Regular prices: Untested Queen, \$.75, Six \$4.25; Twelve, \$8.00. OGDEN BEE & HONEY CO., Ogden, Ut., Timberling Riggs Breeder tf

QUEENS—California queens, nuclei, and bees bred from the best Doolittle stock, ready for shipment at once. Queens, untested, 75 cts; per dozen, \$8.00; tested, \$1.25; per dozen, \$12.00; mismatched, one year old, 50 cts.; per dozen \$5.00; tested, one year old, 75 cts.; per dozen, \$8.00; nuclei, two-frame, \$1.50; three-frame, \$2.25; five-frame, \$3.00; ten-frame colony, \$4.50. Bees by pound: One-half lb., 75 cts.; 1 lb., \$1.00. Add prices of queens desired to all above prices of bees and nuclei. Delivery guaranteed. No disease. Address SPENCER APIARIES CO., Nordhoff, Cal. tf

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each have for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Wilmer Clark, Eastville, N. Y.—150.
 A. S. Crotzer, Lena, Ill.—94.
 G. M. Withrow, Mechanicsburg, Ill.—25.
 L. R. Beebe, Mosinee, Wis.—200.
 Wm. McKibben, Ontario, Ore.—160.
 Wilmon Newell, College Station, Tex.—100.
 The E. F. Atwater Co., Meridian, Ida.—50 to 300.
 O. H. Townsend, Otsego, Mich.—300
 Hiram Roop, St. Louis, Mich.—100.
 Arthur J. Schultz, Ripon, Wis.—80.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

WANTED—Beeswax at 31c per lb. JOHN O. EUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—300 lbs. unhulled yellow sweet clover seed. L. P. Holms, Newcastle, Wyo.

WANTED—Reliable man experienced in comb and extracted honey production. J. E. PATTON, Halleck, Nevada.

WANTED—One or two good able bodied young men as students with me in my bee business. Please apply at once. Address O. H. TOWNSEND, Otsego, Mich.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

Sweet Clover Seed

I have a few hundred lbs. of unhulled white sweet clover seed (biennial) for sale. Price 15c per lb., 50 lbs. or more. Less than 50 lbs., same price plus 20c for bag. Prompt shipment or money refunded. Ira D. Bartlett, East Jordan, Mich.

WHITE SWEET CLOVER SEED FOR SALE—We have at Wheatland, Wyoming, 700 lbs. of unhulled white sweet clover seed, that we can sell in lots of not less than 50 lbs. at 14c per pound. Address, The Beekeepers' Review, Northstar, Michigan.

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using Eureka Paste. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

FOR SALE — White sweet clover seed, machine cleaned, unhulled; \$16.00 per hundred; hulled \$22.50 per hundred. Wesley Foster, Boulder, Col.

We have for sale at Plano, Ill., 100 lbs. of unhulled White Sweet Clover Seed that we can sell for 14 cents per lb. in 50 lb. lots or more. Address The Beekeepers' Review Northstar, Mich.

UNHULLED WHITE SWEET CLOVER SEED—We have 700 lbs. of Unhulled White Sweet Clover Seed for sale in Wheatland, Wyoming, that we can sell in 50 lb. lots or more at only 13½¢ per pound. This is somewhat under market, and ought not last long at the price. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

We have a quantity of white sweet clover seed at Buhl, Idaho that we can furnish our members as long as it lasts at 20¢ a pound of hulled seed and 13¢ for the unhulled variety. You should order 50 lbs. to get this low rate. Address THE BEEKEEPERS' REVIEW Northstar, Mich.

LEWIS BEEWARE—Root's Extractors, smokers, etc.—Dadant's Comb Foundation. Large stock always on hand for prompt shipment. Western Beekeepers can save money by patronizing the oldest co-operative association of beekeepers. Illustrated catalogue free. **The Colorado Honey Producers' Association, Denver, Colorado**

California Redwood hives, one story complete with ten frame \$1.00 supers with 9 frames 50¢. Discounts 25, 10 per cent; 100, 20 per cent. Extracted honey cases 65¢. Dadant foundation delivered by prepaid freight anywhere, medium 52¢, thin 54¢, surplus 59¢. Supplies of all kinds at 5 per cent off manufacturers' prices. Catalogue free. Spencer Apiaries, Nordhoff, Calif.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg'rs. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

FOR SALE—Two dozen mailing cases, bottles and corks, for mailing samples of honey, sold to members for an even dollar. They weigh four pounds and are packed to go by parcel post. Your postmaster can tell you how much to include for postage from Lowell, Mass. Larger quantities at correspondingly less price to go by freight or express. Say how many you can use. Address THE BEEKEEPERS' REVIEW, Northstar, Mich.

POULTRY

White Wyandottes and Buff Orpington eggs: \$1.00 per 15, \$5.00 per 100. Healthy, vigorous stock. G. M. Withrow, Mechanicsburg, Ill.

BOOKS ON PRACTICAL BEE CULTURE

Mailed Post Paid Upon Receipt of Price

A B C and X Y Z of Bee Culture, cloth	\$2.00
A B C and X Y Z of Bee Culture, half leather	2.75
A B C and X Y Z of Bee Culture, German	2.50
A B C de L'Apiculture, French ed.	2.00
El A B C and X Y Z de la Apicultura, Spanish	2.50
Langstroth on the Hive and Honey Bee Reprint	1.00
Advanced Bee Culture, W. Z. Hutchinson	1.00
Biggle Bee Book	.50
British Beekeepers' Guidebook, Cowan	1.00
Cook's Manual of the Apiary	1.15
Doolittle's Queen-rearing	1.00
Fifty Years Among the Bees, C. C. Miller	1.00
First Lessons in Beekeeping	.50
Honey Bee. The—Cowan	1.00
How to Keep Bees—Mrs. Comstock	1.00
Humble Bee, The—F. W. L. Sladen	3.25
Irish Bee Guide, Rev. J. G. Digges	1.00
Langstroth, Rev. by Dadant, cloth	1.25
Modern Bee Farm, S. Simmins	2.00
Quimby's New Beekeeping	1.00
Wax Craft	1.00
Increase Forcing the Queen to Lay; each	.25
French edition, separate	.50

POPULAR BOOKS ON BEE CULTURE

Bee People, The, Margaret M. Morley	\$1.50
Children's Story of the Bee	2.00
Honey Makers, The, Margaret M. Morley	1.50
Life of the Bee, Maeterlinck	1.40
Bee Master of Warrilow, The—Edwards	.57
Lore of the Honey Bee	2.00
Queenie	.75
Bee Models	each 50¢; 2 for .75

Address All Orders

THE BEEKEEPERS' REVIEW

Northstar, Michigan

WHEN YOU HAVE SOMETHING TO SELL, A SURE WAY TO REACH BEEKEEPERS IS THROUGH THE

REVIEW CLASSIFIED

DEPARTMENT

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, are furnished at 30c. per thousand postpaid. Advertise Honey. Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to
PEARL CARD CO., Dept. A3, Clintonville, Conn.

Elkhart, Indiana,
March 13, 1915.

Beekeepers' Review,
Northstar, Mich.
Gentlemen:

My name in the "Honey Wanted" column has supplid me with all the honey that I can use this season and so it need not appear again.

I am anxiously awaiting the details of the meeting at Denver. I was disappointed in not being able to be present.

Very sincerely yours,
B. F. KINDIG.

THE REVIEW HALF PAID FOR

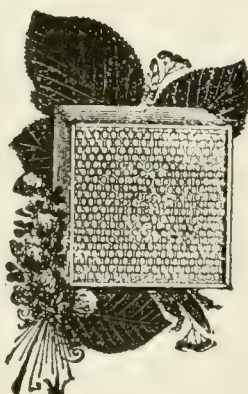
On January 1st, we paid our interest on the Review Debt, \$42 from the general fund, as usual, and on the

same date paid \$200 on the principal, from the Review debt subscription list. This makes \$500 and interest paid, making the Review half paid for, leaving the subscription account stand thus:

Amount previously acknowl-	
edged	\$22.35
Mrs. May G. Alley,	
Pine Grove, W. Va.....	1.00
Willis C. Collier, Goliad, Tex...	1.00
H. B. Phillips, Auburn, Me....	1.00
John G. Wagner, Elkader, Ia...	1.00
W. S. Wilbur,	
Diamondale, Mich.	1.00
Wilmon Newell,	
College Station, Tex.	1.00
Walter Harmer,	
Pierport, Mich. ....	.50

As our contract with Mr. Tyrrell becomes due two years from the first day of next June, it will be noticed that we have some more than \$200 per year to raise, to meet this obligation. We surely should swell this \$28.85 to at least \$200 by the end of the year. You will not miss a dollar or two. Let this little amount come forward.

National Writing Paper and Envelopes for the Subscribers



We are now better prepared than ever to furnish the members, or subscribers with their writing paper and envelopes. The paper headings will contain the new Officers and Directors of the National elected at the Denver meeting in February. The envelopes will be printed with return card as usual. Paper and envelopes can be printed with either of the three cuts shown above. In ordering, mention which is preferred.

We quote 250 Envelopes, post paid for\$1.50
We quote 250 Paper, post paid for 1.50

If you prefer to have your printing done at home, we can furnish you with any of the above cuts to print from at only 50c each, postpaid. Address

THE BEEKEEPERS' REVIEW, Northstar, Michigan

..ANNOUNCEMENT..

The annual dues of the National Beekeepers' Association are now \$1.50 in addition to your local dues.

Who Are Now Members

A decree rendered by the delegates at the Denver meeting last month declared all paid-in-advance members of the affiliated associations of the National, members of the National WITHOUT THIS ADDITIONAL FEE BEING COLLECTED. In other words, if you are a member of one of the several affiliated associations, your membership in the National is paid during the life of your membership in the affiliated association.

Who Are Not Members of the National

All previous members of the affiliated associations who are in arrears in their dues, will be required to pay the full fee of \$1.50 per annum.

All persons joining the National Beekeepers' Association since February 19th and thereafter will be required to pay annual dues of \$1.50.

When mailing your one dollar and fifty cents to Secretary Foster, request that he take a dollar of this fee and pay your subscription to the Beekeepers' Review, the official organ of the National Beekeepers' Association, for one year.

If you prefer, you can leave the entire fee in the National Treasury; instead of subscribing for the Review, but the fee is the same in either case.

If more convenient, the National annual dues can be sent to your local secretary, or to this office, they in turn handing the fee to National Secretary Foster.

If the members will keep in mind that there has been no National fee for two years past, and that this \$1.50 is in addition to the local dues they have paid during this period, less confusion will occur.

SUMMARY

National dues, are \$1.50; Affiliated association dues, 50c. As you cannot belong to the National, except you belong to one of the Affiliated Associations, and vice versa, the minimum annual dues to the National and Affiliated Associations, are \$2.00, which may include a years' subscription to the Beekeepers' Review.

W. H. Laws

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Tested Queens in March; untested after April 1st. About 50 first-class breeding queens ready at any date.

PRICES: Tested, \$1.25; 5 for \$5.00; Breeders, each \$5.00. Address

W. H. Laws, Beeville, Texas

"Here is the Answer;" in WEBSTER'S NEW INTERNATIONAL

THE MERRIAM WEBSTER

Every day in your talk and reading, at home, on the street car, in the office, shop and school you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *jujutsu*. What is *white coal*? This New Creation answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority*.

400,000 Words.
6000 Illustrations.
Cost \$400,000.
2700 Pages.

The only dictionary with the *new divided page*,—characterized as "A Stroke of Genius."

India Paper Edition:

On thin, opaque, strong, India paper. What a satisfaction to own the *Merriam Webster* in a form so light and so convenient to use! One half the thickness and weight of Regular Edition.

Regular Edition:

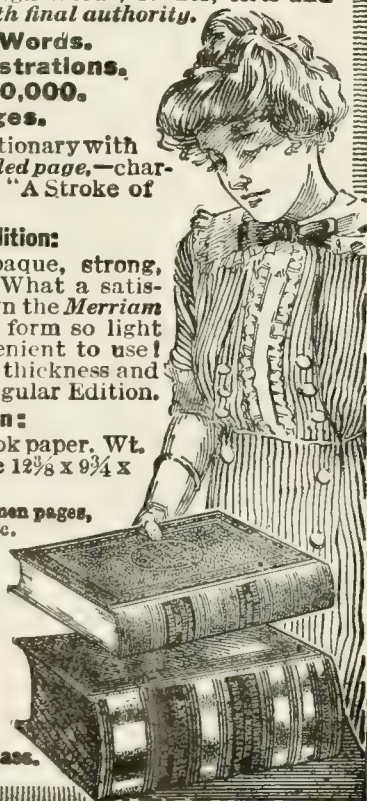
On strong book paper. Wt. 14¾ lbs. Size 12¾ x 9¾ x 5 inches.

Write for specimen pages, illustrations, etc.

Mention this publication and receive FREE a set of pocket maps.

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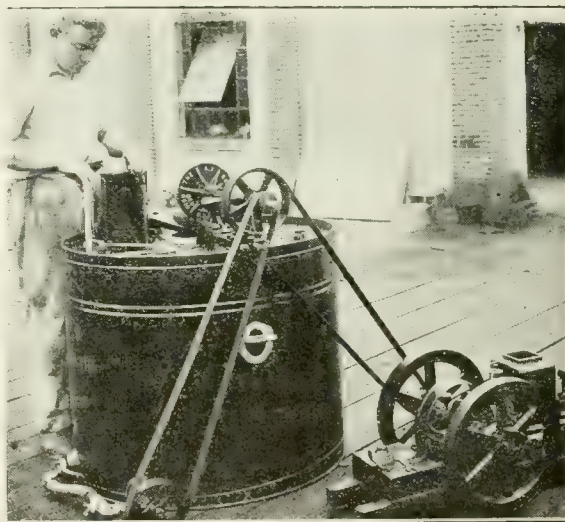
Springfield, Mass.



FOR SALE—An extra fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, rosy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys superior white clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address

E. D. TOWNSEND & SONS,
Northstar, Mich.

Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP**, then run them with a **NATIONAL 1½ H P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.



Root Automatic Extractor, National Engine and Honey Pump in Position.

A one inch galvanized pipe, threaded with elbows, transfers the honey from the pump to the honey tank at one side.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and everything necessary pertaining to the outfit at \$86 50.

Six-frame extractor outfit as above at \$93.50 eight-frame extractor outfit as above, but containing a one inch pump, instead of the ¾ in. pump listed above \$104.50 If wanted without pump, deduct \$18.00 for ¾ in. pump and \$22.00 for 1 in. pump.

These prices are for the very latest Friction driven machines. If you should order an engine without the extractor, kindly say whether the gear of your extractor is 1 to 1 or 2 to 1. then we will order the suitable pulley.

The above prices are List, from which a considerable discount is made to subscribers.

THE BEEKEEPERS' REVIEW
Northstar, Michigan

"falcon"**Bee Supplies**

SHIPPING CASES, EXTRACTORS,
HIVES, ETC. EVERYTHING
FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

**"The Pearce Method
of Beekeeping"**

The Pearce method of Beekeeping is now being revised and brought up to date. The first edition of 5000 copies have been some time out of stock and Mr. Pearce is now rewriting the entire work and bringing it up to the very minute. It will be the same size as the old volume, but contain many more pages. The new work will be ready for delivery by early spring. Price 50c post paid, or clubbed with a year's subscription to the Review for only \$1.10.

Address

The Beekeepers' Review
Northstar, Michigan

The Beekeepers' Review Clubbing List for 1915

In the following combinations we offer periodicals of sterling worth. Remember, you are not receiving some premium of questionable value, but a saving of dollars and cents on your 1915 reading matter. The combination offers with the reduction we are able to allow are as follows:

The Review	\$1.00	All five
Woman's World	.50	\$1.25
Household Magazine	.50	the bargain
People's Popular Monarly	.50	of the
Farm Life	.50	season

Total value \$3.00

Here is another good one:

The Review	\$1.00	Both for
The Youth's Companion	2.00	only \$2.25

The following are of
sterling cash value:

The Review	\$1.00	Both for
American Bee Journal	1.00	only \$1.50

Save \$1.30 on this combination.		
The Review	\$1.00	\$4.00 worth
Everybody's Magazine	1.50	for only
The Delineator	1.50	\$2.70
Another is:		
The Review	\$1.00	Both for
Reliable Poultry Journal	.50	\$1.25
The Review	\$1.00	Both for
Gleanings in Bee Culture	1.00	only \$1.50
The Review	\$1.00	\$3.00 cash
Gleanings in Bee Culture	1.00	value for
American Bee Journal	1.00	only \$2.00

Special offer to new subscribers To those ordering early before the supply is exhausted, we will send in connection with any of the above combinations, the last eight months of the Review for 1914, which contains the National convention report with many valuable papers read at said convention, besides other articles of value not appearing in other papers. Address with remittance.

The BEEKEEPERS' REVIEW, Northstar, Michigan

GRAY CAUCASIANS

Their superior qualities are early breeding; great honey gatherers; comb honey cappings being beautifully white; very prolific; very gentle; great comb builders; not much inclined to swarm; give better body to their honey; not much inclined to rob; very hardy; never furious, good winterers everywhere; the best all-purpose bee. Send a trial order for a queen or nuclei and be convinced. Prices on application.

J. J. WILDER, Cordele, Ga.

Tumbler Shaped Jellies for Subscribers

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them.

Six oz. Tumbler shaped Jellies, hold 8-9 oz. honey, barrel of 27 doz.....\$4.50
Gross in 2 doz. paper reshipping case 2.50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs honey, Bbl. of 21 doz..... 3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at..... 2.75

Prices are f. o. b. Columbus, Ohio.
Address all orders to

BEEKEEPERS' REVIEW
Northstar, Michigan

NOTE—We call the subscribers' attention to the fact that the above prices are a considerable lower than that of the glass trust.

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

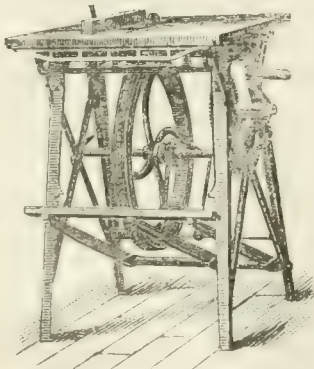
1 gallon can, including mailing case, per crate of 50.....\$5.50
1/2 gallon can, including mailing case, per crate of 100..... 9.50
1/4 gallon can, including mailing case, per crate of 100..... 7.50
1/2 gallon square round cornered syrup cans, 1 3/4 in. screw cap, per crate of 100..... 5.50
1/4 gallon square round cornered syrup cans, 1 3/8 in. screw cap, per crate of 100..... 4.00

We cannot furnish less than a full crate of the above at any price.

If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

Address all orders to the
BEEKEEPERS' REVIEW
Northstar, Michigan



MAKE YOUR OWN HIVES
Bee-Keepers will save money by using our FOOT POWER
SAWS

hives, sections and boxes. Machine on trial
SEND FOR CATALOGUE.

W. F. & JNO. BARNES CO.
84 RUBYSTREET ROCKFORD, ILLINOIS

American Bee Journal

ANNOUNCES

Two Big Features--Beginning Jan. 1915

FRANK C. PELLETT, well known lecturer, naturalist and State Inspector for Iowa will write a series of articles well illustrated on "Honey Flora of the United States."

QUEEN REARING IN ITALY. While in Italy last year, C. P. Dadant, had the opportunity to visit a modern queen-rearing establishment. He states that it is the finest and best kept apiary and queen establishment he has ever seen. Full particulars with illustrations in January number,

We Try to Improve With Every Number

Begin Your Subscription with January 1915--\$1 a Year

SAMPLE COPY FREE

AMERICAN BEE JOURNAL

Hamilton - Illinois

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DR. C. C. MILLER

Department Editors

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J. L. BYER

J. J. WILDER

WESLEY FOSTER

J. E. PLEASANTS

Special articles by prominent beekeepers and authorities on beekeeping.

Dr. Miller answers any question asked.

QUICK GERMINATION

Sweet Clover Seed

Get our SPECIALLY TREATED HULLED SEED which will germinate 90 per cent to 98 per cent. Also causes seed to sprout quickly. Insures a better stand with less seed per acre than ordinarily used. Samples on application.

	1 lb.	10 lbs.	25 lbs.	100 lbs.
White Sweet Clover (Unhulled, hand screened)	\$.20	\$1.80	\$4.00	\$15.00
White Sweet Clover (Unhulled, recleaned)	.25	2.25	5.00	18.00
White Sweet Clover (Hulled, recleaned)	.35	3.00	6.75	24.00
Yellow Sweet Clover (Hulled, recleaned,				
Melilotus Officinalis) . . . . .	.25	2.30	5.50	20.00
Alsike Clover Seed (Hulled) . . . . .	.25	2.00	4.50	17.00

Special prices on large quantities

The recleaned seed is machine-cleaned and light seed, all seed f. o. b. Hamilton, and is free from chaff, dirt, prices. No charge for bags. on, or Keokuk, Iowa, at the above

DADANT & SONS, Hamilton, Illinois

YELLOW SWEET CLOVER.—Many people fail to recognize the value of Yellow Sweet Clover as a honey-plant. The fact that it blooms two weeks earlier than the white variety makes it especially valuable to the beekeeper. Be sure, however, to get the "Melilotus Officinalis" as quoted above.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

James T. Johnson, R. F. D. No. 1, Percy, Ill.

Henry J. Zinn, 1135 Who. Ave., Forty Fort, Pa.

Rocky Mountain Bee Co., Forsythe, Montana

H. H. Thale, Maywood, Mo.

E. S. Smith, Westville, Ind.

Walter C. Morris, Yonkers, N. Y.

Fred H. Loucks, Lowville, N. Y.

Try the Review Classified Dep't

Ladies we need the cash!



59¢ for a \$1.50 Waist means 91¢ to YOU

10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 seller must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four. Your money refunded if not satisfied.

GENERAL SUPPLY CO.
168½ BZ Delancey Street
New York City

National Members Having Honey for Sale

We are herewith submitting a list of subscribers having honey for sale. This list only includes those who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale. Nearly all have extracted honey, and about one-third have both comb and extracted honey. This list is published free, two insertions, to paid-in-advance subscribers to the Review, each year. Those wanting their name to appear longer can do so by paying 20c each additional issue. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

A. O. Heinzel, Lincoln, Ill.

HORSEMINT

Wilmon Newell, College Station, Tex.

RASPBERRY

O. H. Townsend, Butterfield, Mich.

Perry May, Bellair, Mich.

ALFALFA

Wesley Foster, Boulder, Colorado.

Arizona Honey Exchange, Tampe, Arizona.

A. A. Lyons, Fort Collins, Colo.

AMBER

Quirin-The-Queen-Breeder, Bellevue, O.

Thos. Worthington, Leota Landing, Miss.

Latshaw Honey Co., Carlisle, Ind.

Penn. G. Snyder, Aibonito, P. R. -d4.

O. P. Hendrix, West Point, Miss.

G. Frank Pease, Shreveport, La.

A. D. Herold, Box 186, Sonora, Cal.

R. A. McKae, Velasco, Texas.

F. M. Morgan, Hamburg, La.

Otto Luhdorff, Visalia, Calif.

J. E. Ramage, R. 7, North Yakima, Wash.

M. J. Sain, Hanford, Calif.

MESQUITE

Arizona Honey Exchange, Tampe, Arizona.

CLOVER AND BASSWOOD BLEND

Elias Fox, Union Center, Wis.

N. E. France, Platteville, Wis.

F. Gobeli, Glenwood City, Wis.

M. E. Engle, Herradura, Cuba.

WHITE CLOVER

Wm. Fox, Withee, Wis.

Wm. E. Prish, Mineral Point, Wis.

Quirin-The-Queen-Breeder, Bellevue, O.

A. H. Fralick, Homer, Minn.

Joseph Kurth, Mineral Point, Wis.

E. B. Rosa, Monroe, Wis.

J. H. Allemier, Delphos, Ohio.

F. M. Morgan, Hamburg, La.-4.

BUCKWHEAT

N. L. Stevens, Route No. 18, Venice Center, N. Y.

Jas. McNeil, Hudson, N. Y.

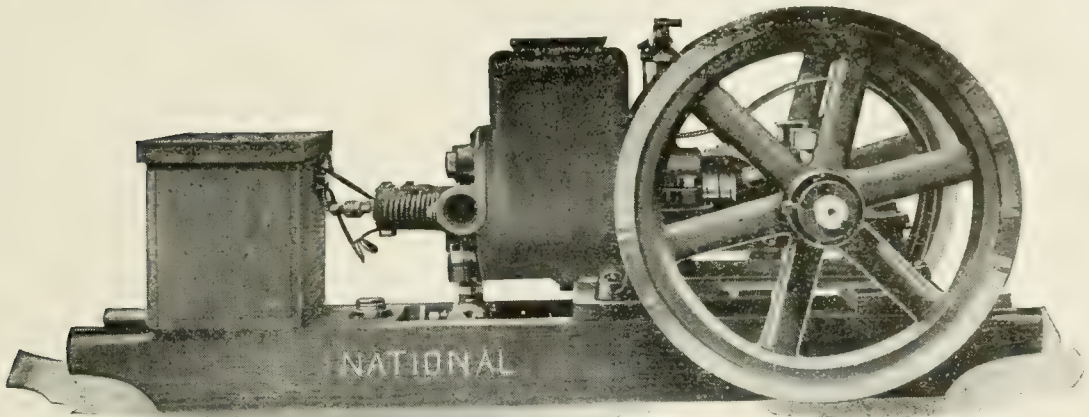
E. J. Stahlman, West Berne, N. Y.

SAGE

George B. Lariman, 1066 E. Calif. St. Pasadena, Calif.

R. J. Krause, Dehesa, Calif.

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncrated and supplied with fuel and lubricating oil.

Horse power, $1\frac{1}{2}$; bore, $3\frac{3}{4}$; stroke, $4\frac{1}{2}$; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, $1\frac{1}{4}$; floor space, 9x36; shipping weight 200.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to The Beekeepers' Review, Northstar, Michigan.

CANADIAN BEEKEEPERS

Want queens and Bees this spring.

Advertise your stock in

The Canadian Horticulturist and Beekeeper

The Only Bee Publication in Canada

It is the official organ of the Ontario Beekeepers' Association and has incorporated with it the former Canadian Bee Journal.

Well illustrated and up-to-date.

Subscription price postpaid—

Canada—\$1.00 a year.

United States—\$1.25 a year.

Foreign—\$1.50 a year.

Sample Copy sent free on request.

THE HORTICULTURAL PUBLISHING CO., LTD.
PETERBORO, ONT, CANADA

TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity		Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	.....	\$2.25		\$2.15	\$20.00
2½ lb. Can	.....		2.75	2.60	24.00
3 lb. Can	.....		3.00	2.85	28.00
5 lb. Pail	.....	\$5	4.75	4.50	42.50
10 lb. Pail	.....	7	6.50	6.25	50.00

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	\$0.60 per case
24 cans in a case, 2½ lb. Cans71 per case
12 pails in a case, 5 lb. Pails65 per case
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6 pails in a case, 10 lb. Pails49 per case
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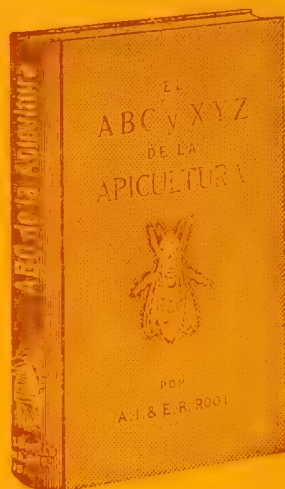
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



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The Beekeepers' Review

Published Monthly

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Sel Tested..	3.00	15.00	24.00
Tested Breeding Queens	\$5.00 and \$10.00 each		

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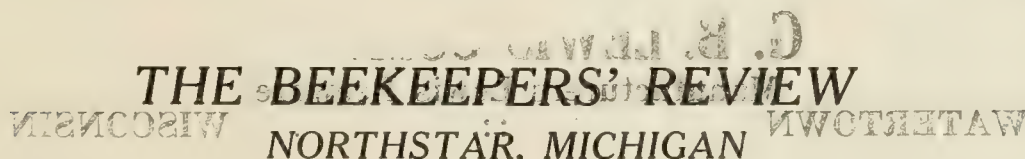
	1	6	12
1/2 lb.....	\$1.50	\$ 7.50	\$12.00
1 lb.....	2.00	10.50	18.00
2 lbs.....	3.00	15.00	27.50

These prices are without Queens.

Prices on Nucleus and Full Colonies without Queens: Shipping now.

1 Frame Nucleus \$2.00; 2 Frame Nucleus \$3.00; 3 Frame Nucleus \$4.00
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Knowing this stock so thoroughly and the breeder being of National reputation, we do not hesitate to recommend this stock to be as good as money can buy, either imported or domestic. Remember we will book orders in rotation. First come, first served. By ordering now you will be quite sure of getting your queens when you want them. It is quite likely to be different, later. Order with remittance.



THE BEEKEEPERS' REVIEW
 NORTHSTAR, MICHIGAN

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AND ITS AFFILIATED ASSOCIATIONS

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VOL. XXVIII

NORTHSTAR, MICHIGAN, MAY 1, 1915

No. 5

The new secretary of the National Beekeepers' Association is Wesley Foster, Boulder, Colorado, to whom all correspondence relative to the association should be addressed.

Read announcement on page 153 and mail your National annual dues of \$2.00 to Secretary-Treasurer, Wesley Foster, Boulder, Colorado.

Moving Bees Where a Better Grade of Honey is Secured

Many are moving their bees from a "worn-out" location to one where better crops can be secured. The thought occurs, why not move from a location where a low grade of honey is secured, to one producing the better? The ready sale at a better price, is a reason. The one located where a low grade of honey is produced, is **always** in competition with the low grade of foreign honeys. Food for thought.

This year more forcibly than ever demonstrated to us the folly of trying to build up colonies faster than the weather conditions will permit. The bees seem to know when it is safe to breed up. We fed with Alexander feeders, we spread brood as rapidly as we dared (warranted by past experience), and all in vain; some colonies that were not touched did fully as well as those with which we took most pains. Again, we noted with joy, that hives fullest of stores, so full, in fact, that we wondered what the bees could do with it all, built up most rapidly, and were most ready for the supers. Hereafter we shall build up in the fall, do all our stimulative feeding in the fall, get hives overflowing with bees and "chock full" of honey, and then trust to Dame Nature to give us rousing colonies in time for Orange Bloom. We believe she can and will do it! Of course, we are now speaking of conditions here, at the home yard. Over at the east coast, things are different; it seems no trouble there to have colonies build up early. We attribute it to the more constant succession of little stimulative sources of honey, vines, shrubs and flowers, as well as trees, all in and about and through the hammocks. We now have some colonies there that fill three and even four stories with bees, and are ready for any crop, no matter from what source it may come. We have learned by experience that the only colonies that pay to keep, are the **rousing colonies**. If you can not keep your colonies full of bees, you might as well go out of the apicultural work. For weak colonies are the rock on which many a bee man (so-called) has made shipwreck.—E. G. B.

Early as we can, when there are from five to six, or seven frames of brood in body of our hives (depending on warmth of season), we go to every hive with that number of frames of brood, and lift one or better two frames of brood, preferably that which is capped, and set these frames in an upper full-depth super, placing the empty combs or frames of foundation from super, in place of those lifted. Then we close hives, and again, in a week or so, go over them again, and repeat the operation. The frequency of this will be determined by the strength of the stocks and weather conditions. Beware of doing it too rapidly. On more than one occasion, in the past, we have been made a sadder and a wiser man by our over-ambition, "that o'er-leaped itself, and fell on the other side;" for tempted by a warm spell of weather, and prosperous conditions in the hive, we have committed the error of lifting frames too early; and then when a cold snap came, we would find

our frames of brood chilled and deserted, the bees huddled down stairs to keep warm, and all our efforts worse than useless. But, as weather warms up, and bees begin to crowd the hive a little, it is safe to operate. This plan, if judiciously persevered in, will enable you to build up fourteen or fifteen frames of brood in a single hive, (two story), by the time that orange bloom begins; and best of all, it will keep down all tendency to swarm before orange really gets into bloom; and after the bees once begin work in earnest, they seem to lose that desire to swarm, all their energies seemingly turning to honey gathering.—E. G. B.

May Stores for Bees

In many locations bees have consumed an abnormal amount of stores during winter, and at this time, May, are very short to breed up on to take advantage of the clover or raspberry flow in June. Between fruit bloom and the clover flow, a period of three or four weeks, is a critical time with the bees, for, if they are not well supplied with stores during this period, breeding will be held up, consequently the field force diminished, which may make a considerable difference in the amount of surplus honey secured. See that your bees have an abundance of stores so that there will be no slackening of breeding between now and your main honey flow in June. It means dollars to you!

Moving Six Yards of Bees

We are moving six yards of bees by wagon this spring. Three of them are our yards that we bought 25 miles north of us a year ago. These we are moving nearer home for convenience in working. Two are old established yards that we are asked to move. One of the above yards the owner sold out, and the new comer did not want bees, the other decided not to re-rent to us another year, although he had no particular excuse. The yards we are moving are known as the Salt, Chippewa, Frost, Wolf and Welch. As we name the yards by the location they occupy, all the above names will be changed this year. The sixth yard to move is the one wintered under my son's dwelling. If any one thinks it is all play and no work to handle 1100 colonies of bees, send them up and we can convince them to the contrary.

One of the handiest devices that we have made to expedite matters in the painting of hives and fixtures, is a turn-table, or stand that revolves. It is exceedingly simple. We made a strong

board frame, or hive rest, about four inches larger every way than a bottom board; this we made to revolve about a pin of wood set into the middle of the under side, this pin entering a one inch augur hole in floor. Under the board we set three old castors, and it is done. We nailed two strips of $\frac{1}{2}$ -inch thickness inside the hive body that we set on the board; this to keep the hives from sliding off, when the table is revolved. We pile up the bodies four or five or six high, and get even. Then we begin at the top and paint down. One does not have to keep moving paint bucket, nor is one in danger of upsetting paint, etc., by squirming about from one side of the pile of hives to another. And, best of all, one can pile the hives up in piles close together and not have to allow room to pass between the tiers of hives; this device allows one to paint in cramped or close quarters, economizing room. Try it, you who have two or three dozen, (or hundred) hives to paint, and see if it does not pay for its labor in making, many times over.—E. G. B.

Orange Bloom This Year

At this writing, March 31st, we are in the midst of the orange bloom. But the prospects are nowhere as good as they should be. The weather all through January, February, and first half of March was cold, rainy and dismal. Brood rearing went on under difficulties, and when orange did open, later by two weeks than usual, the inclemency of weather prevented bees flying more than a few hours in the middle of the day; and the nights were almost cold. In fact, about middle of March we had two nights of heavy frost, even ice forming in low spots. As a result the bloom was retarded, and slowed up on nectar secretion. Since then, while conditions so far as weather have improved somewhat, still it is too cool for best showing. Today it has turned cool again, and bees did not gather more than enough to feed the brood in the hive. We have had that hive on the scales, as usual, and that shows conditions without any guessing. It is my best colony, and for the first two weeks showed from no gain, daily, to an average of two or three pounds. That is about one-fourth what it ought to be. Day before yesterday, March 29, the greatest gain thus far was recorded: 7 pounds were stored that day, and 6 pounds the next day, March 30. If this weather continues, I fear our honey crop here will be like the Irishman's pig; he fed it one day and then starved it a day, in order to have a streak of fat and a streak of lean! We can also detect the difference in yield of nectar this year over last, when we pass a grove. Then we could scent the odor far

and wide, most sweet and strong. Now the fragrance is not nearly so discernible to the nostrils when one is near a grove. Nor can we see drops of nectar shining in the bottom of the blossoms, as we can when the bloom is full of nectar. While we have masses of blossoms, it is not so full of honey as it should be. The bees do a lot of flying, and hustling, are busy whenever the weather allows it, but results are not commensurate with their efforts. As a result, they are cross as Hybrids all the time—I can hardly explain their savageness otherwise than by the fact that they are constantly in the condition of bees, when the flow has ceased suddenly. They are worried and exasperated, and ready to “take it out” on the first intruder. But we are likely to have two weeks of orange bloom yet, and it is too soon to know the yield. Two weeks can do wonders for the supers, all things being right for it!—E. G. B.

The Honey Market Situation

The honey market is in much better shape than we feared it would be at this time. There has been produced none too much comb honey of the better grades. The fact is, more comb honey **could** be produced and not glut the market. The tendency seems to be to produce extracted honey, to the neglect of comb. Those who are situated to produce comb honey, had better think twice before changing to the production of extracted. There will likely never be an over production of good comb honey. The extracted honey market is different. While there will not be much, if any good white clover, raspberry or basswood extracted honey carried over, there is an over supply of the medium to poor grades of extracted on the market, both imported and domestic.

Conditions This Year in Cuba

We have received a very interesting letter, giving a glimpse of honey conditions in Cuba this winter. It is from Mr. R. Herbert Bigelow, of Ceiba Mocha, Prov. de Matanzas, Cuba, and we append it herewith in full.

We have noticed in several of the current issues of the apicultural papers, honey advertised for sale from Cuba. It may be that conditions are not quite so bad, all over the Island, as at Ceiba Mocha, as our friend reports. We trust it is not, but the low prices that he regrets, will doubtless prevail until better business conditions obtain generally all over the world. Heretofore, hundreds of German buyers had advance agents out, all over Cuba, buying up the honey of the large producers by the shipload. They

usually secure about 40 cents per gallon, wholesale, for their best honey. This year, we understand, the prices are only about one-half that, and very slow sale even then. Cuba, like South America, suffers more than the U. S. from the war depression, because they sent more honey abroad. We, here in the States, are consumers of our own honey for the most part, and our prices are affected largely from our own business stagnation, not from the lessened exportations so much. As we have said before, however, it is the man who "means business" and who hangs on, that will win out; the half-hearted will become discouraged at the untoward conditions and quit.—E. G. B.

Ceiba Mocha, Cuba
Prov. de Matanzas,
February 7, 1915.

Mr. E. G. Baldwin,
Dear Sir:

Your letter reached me as I was going to Havana, and not being able to send you any honey I delayed answering until now, so as to be more at leisure.

In Cuba we have had a difficult year with the bees, this season.

Usually a season which starts without a temporal, violent wind and rain—in November or October—gives us an abundant crop and offsets any ordinary drop in prices.

This year, however, in spite of a splendid preliminary flow, a long spell of wet, chilly weather has prevented our two main crop flowers from secreting any honey, and we are left with something less than half our usual amount of honey. We have an early flow which begins in August, from various wild-flowers; the bell-flower starts in October and lasts until into January, and should furnish about one-third of a normal crop; the romerillo, our other main honey plant, begins flowering in December, and is now going by. It is a high, branching plant, with a yellow, daisy-like flower, and should give us rather more honey than the bell-flower.

This year, owing to bad weather, the bell-flower gave us only one fair extraction, the honey being mixed with that of other flowers; and only those where apiaries are in the midst of especially good romerillo pasture have had an extracting from it.

On top of all this we have had to endure the effects of the war—our prices being twenty odd cents a gallon instead of the usual forty and fifty.

Beekeeping is more difficult here than formerly, as the island is now so stocked with animals, and cultivated, that much of the former pasturage is now lost to us.

Farther back from the towns, there are still good ranges to be had. We are troubled more or less by foul brood, but with proper care this can be kept down and is no worse here than elsewhere.

Hoping to hear from you again, I remain

Very truly yours,

R. H. BIGELOW.

How We Do Our Feeding During Spring

We use sugar syrup for spring feeding, use about two sugars to three water and if handled when quite hot, it will spray into the combs better, for, we put it direct into the combs, spraying it into the cells, thus forcing out the air so the syrup will enter. One would think that this would be a slow tedious job, but it is not, for it requires not more than two minutes to fill a comb with syrup. An average L brood comb will hold about four pounds of feed, so it is easy to determine the amount fed. Sugar syrup is likely not as good a feed to stimulate brood rearing as honey, but it is cheaper, does not cause as much robbing. Then we have some disease among our bees which prohibits the feeding of honey. We have not fed an ounce of liquid honey in years for fear of disease.

Farmers' Bulletin No. 653

The above Bulletin "Honey and Its Use in the Home," by Caroline L. Hunt, expert in Nutrition, and Helen W. Atwater, Assistant in Nutrition, office of experiment station, U. S. Department of Agriculture, is on my desk.

This Bulletin will likely do more to popularize honey than any previously issued, providing that beekeepers take advantage of this splendid chance to have them distributed among their friends and customers. This bulletin has 26 pages the size of the Review, and is crammed full of valuable information, just the kind you would like to have your customer know.

Besides a great array of valuable information regarding honey as a food, it contains between fifty and sixty cooking receipts, similar to the ones that were given away by the League Fund a couple of years ago, and are sold by supply houses at the present time.

Where this bulletin is more valuable than any other published before, is, it has the government stamp of approval upon it, which will give your customers confidence in honey that they may never have had before. Now the beauty of it is, all you have to do is to furnish your Congressman with a list of your neighbors and custo-

mers, with address, and a copy will be forthcoming to them. If everybody "gets busy" and orders copies mailed as they should, our representatives at Washington would "take notice" and more than the present edition be furnished should we require them. It surely is an opportunity all should take advantage of. We submit below what Dr. Phillips thinks of this bulletin.

April 9, 1915.

Mr. E. D. Townsend,
Northstar, Michigan.

Dear Mr. Townsend:—

I am sending you a copy of Farmers' Bulletin No. 653, "Honey and Its Use in the Home," by Caroline L. Hunt and Helen W. Atwater. This bulletin is not prepared in this office but I am calling this especially to your attention because I believe it is a publication which will prove of considerable value to beekeepers in all parts of the country. It is a bulletin which every beekeeper, every beekeeper's wife and every customer should have. It is distributed free of charge on application to the Department and through members of Congress. Beekeepers may be able to have their customers supplied through their Representatives and Senators.

It will pay us all to see that this Bulletin is widely distributed.

Very truly yours,

E. F. PHILLIPS,

In Charge Bee Culture Investigations.

The Mistakes and Lessons of a Semi-Amateur

EARL F. TOWNSEND, Milford, Michigan

I had kept bees some years before with reasonable success and after twenty years spent in the drug business was compelled to leave it for some out-of-doors occupation for health's sake and instinctively turned to bees, the vocation which I knew next best to the drug business. I sold my drug store in March and shortly thereafter purchased 20 colonies of bees, setting one-half of them at my home in the village and the other half on the farm of a friend three miles out. After looking around most all summer for a suitable small farm in what would be considered a good bee country we finally in August found what suited us in Milford, about fifty miles from where we were living. On account of wishing to have the children enter school in our new home as soon as school

opened and also because I had promised to relieve a brother druggist for two weeks while he was on his honeymoon, we moved bees and all rather sooner than we would have otherwise done, and after everything was ready it turned intensely warm. The bees were very strong, in fact, as strong as any colonies I ever remember having. While we were loading the car with our household goods, Mrs. Townsend sent down a dray load of extracting supers which I had intentionally NOT let the bees clean out as I suspected European foul brood and I desired to render up these combs. Of course, Mrs. Townsend did not remember my intention to melt up these combs and her sending them to the car was merely an oversight. However, the trouble had started as the bees had not been doing much and were glad of just such a chance and shortly thereafter were coming to the car in clouds to get what little honey was in these combs and I judged the out yard also soon found these combs, as when I went there early the next morning to close them up there were any number of them flying in the direction of the car.

I had previously had good success, or possibly I ought to call it luck, in moving bees without loss so did not fully consult the authorities as to the best methods of proceeding, so tacked wire cloth over the entrances and top of the hives. After we had begun to load and there was nothing else to do BUT load I began to realize that I should have raised the wire cloth over the tops of the hives by means of wooden frames at least two inches or more high to give space for the bees to cluster and move about, away from the combs. We also discovered that two of the alighting boards of the Danz bottoms had slipped out a short distance, far enough anyway to allow quite a few bees to escape into the car and these with those that were already in there from the ones that had come to clean out the supers made things quite lively for the men who were helping me move, although they did not try to sting; but it doesn't seem to matter to some persons whether a bee is good natured or not they always expect them to sting and keep waving their hands whenever one comes near them and naturally get stung occasionally.

The result of sending the supers to the car before I had closed up the bees was that we left thousands of bees behind and in the light of my present view of the matter, this was probably the best thing that could have happened, as the colonies were so strong and the weather so intensely hot that we lost twelve colonies out of thirty-eight and it was the strongest colonies that were lost.

Leaving Trenton at 3 P. M. I sat in the car with the bees, the car doors being wide open and the many bees which were loose

flying about the car. I was the object of much attention, a regular "Daniel In the Lion's Den" to most of my audience as we stopped at the towns enroute. We arrived at Milford at 2 A. M. the following morning and after some inquiry, found a drayman who had had some previous experience in handling bees and willingly offered to help me draw the bees to the farm, at the edge of town.

The heat having been so extreme we found upon unloading that some of the bees had smothered and part of the combs had melted down, allowing the honey to run over the floor of the car, starting a "rough and tumble" melee among the bees which were loose as well as among the bees of a gentleman whom I was not aware kept bees in my new home, until I arrived there with mine. My newly made neighbor beekeeper finding his bees were having an exciting time started out to look up the cause and finding us carting our bees from the car to the farm, very kindly came over and helped me stop the robbing, or, rather, get it under control, as they kept at it at intervals for a number of days. My neighbor, Mr. Osborn, gave me an idea to stop robbing of which I had not learned before and which was a great help. It is this: with a paint brush or in fact if a brush is not handy, an old rag, brush some kerosene oil on the entrances of the hives being robbed. It seems to stop the robbing in almost every case in a few minutes.

This experience in moving and the loss of so many bees was not without its lessons, however, as on October 20th I went to Lapeer to ship 100 colonies of the bees of the late R. L. Taylor, most of whose bees I had purchased, the balance working on shares. In getting these bees from Lapeer to Milford, I had several interesting as well as amusing experiences. I had decided to build cheap frames of $\frac{5}{8}$ " x 2" material covered with wire cloth for the tops of the hives and had been informed that there was a saw mill there, where I could have these pieces cut, but upon arrival there found that the mill had gone out of business so had to saw them by hand, tack on the wire cloth and drill in four hundred holes in which to place screws to fasten them to the tops of the hives. This work naturally took longer than I had planned and in fastening up the hives I found many of them quite badly decayed, necessitating a further patching up, but finally I had all loaded in the car at 11 A. M. Saturday and arrived in Flint at 5 P. M., 20 miles away, fast traveling. We lay over in Flint until 12 p. m. and it took an extra freight from 12 o'clock Saturday night until 6:30 A. M. Sunday to get to Milford, 30 miles, more fast traveling. When I left Lapeer I had expected to arrive in Milford, only 50 miles away, by, at least, 5 P. M. Saturday, so had made no preparation for a night's

sojourn in a box car with 100 colonies of bees and supplies for same. At 5 P. M., in Flint it was dark, so I hustled around and found a second hand lantern for sale, had three at home, bought 5 cents' worth of oil, some crackers and cheese and a magazine and prepared for a night of it. After reading by the light of my second hand lantern until my eyes were tired, I made a bed of straw with my leather suit case for a pillow, softened by one thickness of burlap which had been taken along for smoker fuel. Placing the lantern between my legs for warmth, as the night had turned quite cold, I slept until about twelve o'clock, when I was awakened by the freight conductor, who had read on my car "CARLOAD OF BEER. MAN IN CHARGE." He said he wanted some of my BEER and when I informed him of his mistake he shortly left me, as did most of my other visitors. I however felt quite triumphant, when after a hard Sunday morning's work, I finally found 100 colonies in our home yard in good condition, they having come through without the loss of a single colony.

To sum it all up, I feel that with my two experiences with results so different I could now go through the same work with very good results. In shipping bees in such very hot weather and such very strong colonies, I would consider it advisable to divide the strongest colonies several days before loading and fasten above the hive a comb honey super with wire cloth tacked on top. With plenty of water enroute I believe I could bring through 100 per cent in good shape.

Experience is a dear teacher, but a good one.

Spraying Trees in Bloom

By H. F. WILSON, Assistant Entomologist
Oregon Agricultural College, Corvallis, Oregon

Mr. W. H. Volck, Horticultural Commissioner, Santa Cruz County, Watsonville, California, in the January number of "Better Fruit" under the heading of "Caterpillars, Codling Moth, Aphids," pages 16 and 17, makes the following statements: "Owing to the very early attacks of tussock caterpillars, canker worms and leaf folders, the first sprayings should not be delayed until the blossoms have all fallen, but applied while the trees are in bloom. The period from full bloom to the time when two-thirds of the blossoms have fallen appears to be the most practical timing. Spraying with good arsenicals will cause no injury to the blossoms. Apply the first spraying when the trees are in bloom, full bloom to the time when two-thirds of the blossoms have fallen." Note that he states that the time mentioned appears to be the best. This recommendation which is undoubtedly given on reliable data and experiments is a very dangerous one for both the beekeeper and the horticulturist. Certainly such a practice cannot help but cause the destruction of insects which

The National Beekeepers' Association Inc. And its Affiliated Associations

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feed upon the nectar of the blossoms and climbing about over them in search of it aid in cross pollenization. In localities where it is followed the honey bees will be destroyed and one of our local beekeepers suffered much loss from the spraying of a single orchard that he was compelled to move to an entirely different locality.

It is a common recommendation of this station to suggest bees for the orchard and farm, both for the value received from the cross fertilization of fruits and the surplus honey secured.

In view of this recommendation I will state that in Oregon we have the tussock moth, canker worm and several caterpillars which cause more or less damage to the fruit, but only in one instance have they caused enough damage to make it necessary to consider methods of control other than those now in use.

In localities where it becomes necessary to combat these early feeding caterpillars, the spray should be applied before the blossom buds open. At that time the young caterpillars will be feeding and should be more easily destroyed than a week or ten days later.

There may be some opposition to this extra application on account of the cost, but surely the value of the cross fertilized fruit over the self fertilized will be more than the cost of spraying.

Just how much we can depend upon the wind and air currents for distributing pollen is hard to say, but several investigators have carried on experiments which tend to show that not as much pollen is distributed in this way as as one would expect.

In conclusion I would suggest that the fruit growers of every state should be careful about spraying when the trees are in bloom and such a practice should only be resorted to as the last and final means of insuring a crop of perfect apples.

Minutes of The National Beekeepers' Association

GEORGE NICHOLS, Montrose, Colorado, Assistant Secretary

OPENING SESSION—FEBRUARY 16, 1915

The National Beekeepers' Association Convention convened in Denver on February 16, 1915, the President, Dr. Burton N. Gates, called the meeting to order at 9:30 a. m.

The following committees were appointed: On Credentials, E. J. Baxter, F. E. Millen, Frank C. Pellett; On Resolutions, Prof. Francis Jager, D. C. Polhemus, George W. Williams; Special Committee of one on Program, Emil J. Baxter.

Invitations were read inviting the next annual meeting of the Association to be held in the following cities: Buffalo, N. Y., New Orleans, La.; and a resolution presented by Dr. Gates inviting the association to Springfield, Mass. The matter was referred to the Committee on Resolutions.

The Credential Committee presented their preliminary report See copy of committee reports. (Committee Reports will be published later. Ed.)

Moved and carried that a mimeograph copy be made of the official delegate list and copies be distributed for the different motions.

Moved and carried that the Chair appoint an Assistant Secretary to assist in taking the proceedings of the meetings. The Chair appointed George Nichols, of Montrose, Colo. The meeting adjourned at 12:20 p. m.

AFTERNOON SESSION—FEBRUARY 16, 1915

The delegate session called to order at 1:00 p. m.

The supplementary report of the Credentials Committee. was given by E. J. Baxter. (See copy of committee reports.)

The President and Treasurer read their reports, which were accepted as read.

It was ruled by the Chair that no delegate can transfer his proxy.

Moved and carried that Dr. Phillips be allowed to transfer his delegate appointment to Harry Lathrop in order that Mr. Lathrop might represent his own Wisconsin State Association.

Moved and carried that all papers on "Marketing Honey" be presented at one session.

Moved and carried that Dr. Gates' paper be made a special order of business for the evening meeting.

The Chairman asked that the Secretary's report be given.

Clement L. Arthur's report was read. Moved and carried that the report be received and placed on file.

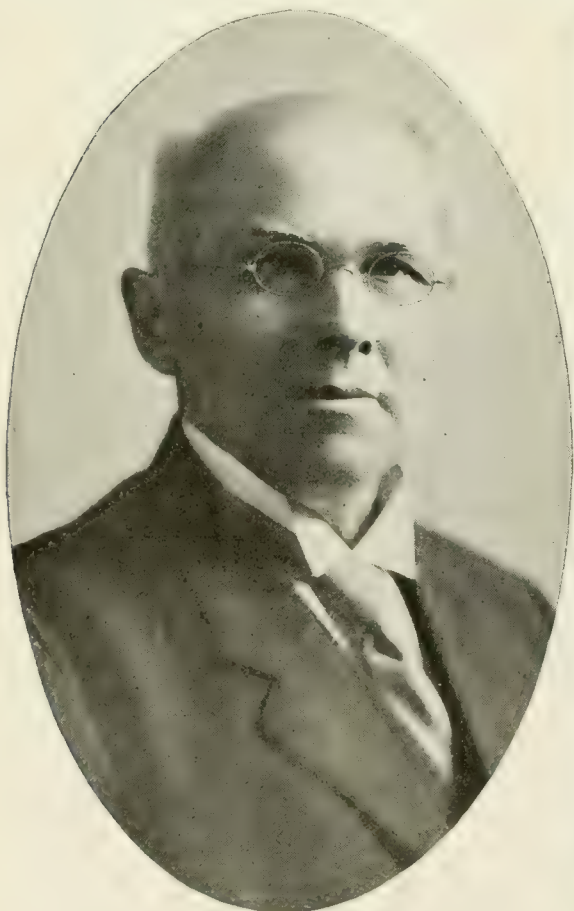
J. H. Stoneman, Wesley Foster and E. D. Townsend were appointed as an Auditing committee.

Summary report of the Editor was required, which was read by G. W. Williams, Mr. Townsend being absent. Moved and carried that the report be received and referred to the Auditing committee.

Report of the Committee on the Standardization and Color of Honey appointed at Cincinnati in 1913 was given by Dr. Phillips. Moved and carried that the report be accepted and the committee continued.

Dr. Burton N. Gates reported for the Committee on the Standardization of Bee Supplies. Moved and carried that the report be accepted and the committee continued.

The President recommended that the fiscal year close on January 31st. Moved and carried that the President's recommend-



Director E. D. Townsend, Northstar, Mich.
Re-elected at Denver, February, 1915



Director E. G. Carr, New Egypt, N. J.
Holds over one year

ation be accepted, and February 1st was designated as the beginning of the fiscal year.

PUBLIC SESSION—3:45 P. M.

Mayor Perkins of the City of Denver gave the address of welcome and granted the liberty of the city. Dr. Bohrer of Kansas responded to Mayor Perkins.

"Europe's Greatest Beekeepers," Thomas Cowan and Edward Berstrand.

The paper of Mr. C. P. Dadant was read by Mr. L. C. Dadant.

The paper on, "The Educational Value of Beekeepers' Associations" by Mr. A. W. Yates was read by Mr. Baxter.

The paper on "Selling Extracted Honey" by Elmer Hutchison was read by Mr. Williams. The paper was discussed of A. A. Lyons, Harry Lathrop, J. H. Stoneman and others.

The paper on "Conditions in Cuba" by D. W. Millar was read by Dr. Phillips.

Open session closed at 4:00 p. m. and delegate session was called to order by the President.

DELEGATE SESSION

The matter of incorporation was taken up and the proposed articles of incorporation were read.

Moved by Frank C. Pellett and carried, That we approve the action of President Gates in completing the incorporation of the National Beekeepers' Association in accordance with instructions of delegates at the St. Louis convention.

EVENING SESSION—FEBRUARY 16, 1915

An invitation was read from the Colorado Honey Producers' Association inviting the National Beekeepers' Association to a banquet on Wednesday evening, the 17th, at 6:00 o'clock.

Mr. E. R. Root gave a talk on "Migratory Beekeeping." Mr. Hersperger gave his experiences in moving bees from Ordway to southern Arkansas.

Mr. Lyons and Mr. Mathews spoke on moving bees.

An auto trip to see the Colorado foot-hills, was announced by the Committee on Local Arrangements.

DELEGATE SESSION—FEBRUARY 17, 1915, 8:45 A. M.

The meeting was called to order by Dr. Gates.

The matter of incorporation was taken up and debate ensued.

Moved by Dr. Phillips and carried, after being seconded by

Frank C. Pellett: That the delegates' meeting adjourn at midnight on February 17th, unless by unanimous consent, it is decided to adjourn sooner.

Moved by Dr. Phillips and carried, after being seconded by Frank C. Pellett: That debate on each question be limited to five minutes and that no delegate may speak more than twice and not more than five minutes in all.

Mr. Williams proposed for Mr. Townsend to take over "The Review" without conditions if the debt be liquidated. He would assume the amount of \$381.14, the only condition being that "The Review" remain the official organ.

Mr. Foster presented the following proposition: "It is proposed that I, with Mr. Polhemus and others, will assume the indebtedness of "The Review" if the Association will turn it over to us; and continue it as the official organ."

Moved by Dr. Phillips and carried: That the National Beekeepers' Association make "The Beekeepers' Review" the official organ of the Association, subject to the conditions that at any time the directors may discontinue this arrangement if the standard of the publication is not sufficiently high, or provided that if any material appears therein which is not in accord with the National Beekeepers' Association, that the National Beekeepers' Association is in no way financially obligated.

Moved by Frank C. Pellett and carried to accept the proposition of Mr. Foster to take over "The Review" and assume the \$500.00 debt to Mr. Tyrrell. This to be full consideration of purchase price.

Ten minutes was granted Mr. Williams to present matter pertaining to incorporation papers.

PUBLIC SESSION—10:00 A. M.

The paper, "Agricultural College and Beekeeping," by Mr. Millen was read by himself. A general discussion followed.

The paper, "A Plea for Better Bees and Queens," by J. Smith was read by F. C. Pellett. Discussion followed, Messrs. Collins, Root, Phillips, Howe, Pellett, Jager and others taking part.

The paper by Prof. Wilmon Newell was read by Dr. Gates.

Mr. J. L. Peabody spoke on the development of the honey extractor, and gave some of his reminiscences of early beekeeping in Denver. Mr. Moon, another old beekeeper, gave some of his experiences.

The paper, "Autumn Mating to Control Inheritance in Honey Bees," by Prof. F. W. L. Sladen was read by Mr. Millen. General

discussion followed for fifteen minutes, when the meeting adjourned to meet at 2:00 p. m.

PUBLIC SESSION—2:00 P. M.

The paper, "Honey Publicity," by George Williams was read by himself. Considerable discussion followed, Dr. Gates, Dr. Bohrer, Mr. Root, Mr. Collins and others taking part.

Musical selections were rendered by Mrs. Wesley Foster and Mr. E. A. Knemeier.

The paper, "Marketing Honey," by John C. Bull was read by himself.

The paper, "Co-operation," by Frank Rauchfuss was read by himself.

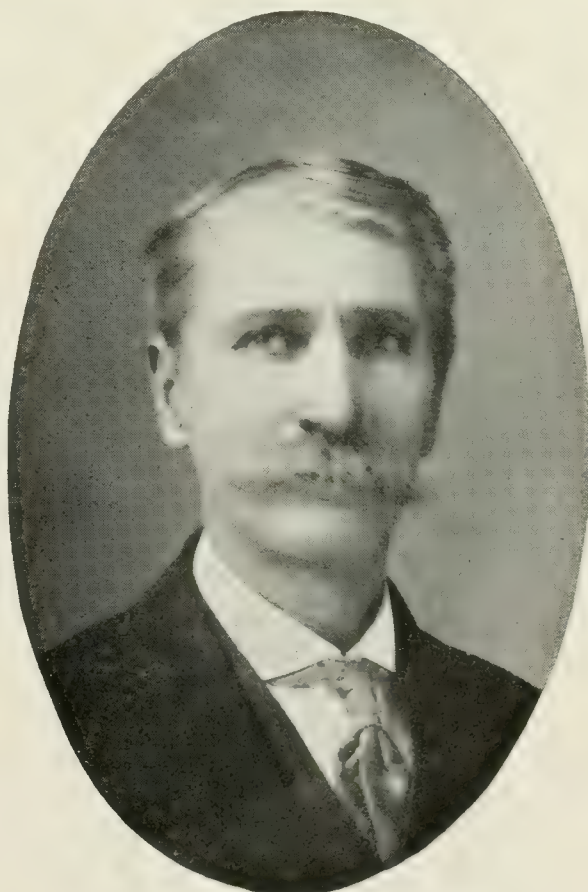
The paper, "Co-operation versus Competition in State Associations," by J. H. Stoneman was read by himself.

The paper, "The Marketing Question," by Harry Lathrop was read by himself.

The paper, "The Development of the Honey Market," by Dr. Phillips was read by himself.



Director J. H. Stoneman, Blackfoot, Idaho
Elected at Denver, February, 1915



Director Geo. W. Williams, Redkey, Ind.
Holds over one year

The paper, "Co-operation Among Beekeepers," by J. W. Stine was read.

Discussions were limited to three minutes. Messrs. Baxter, Pence, Crane, Collins, Porter, Bohrer, Henthorne, Root, Rauchfuss and others taking part.

The paper, "Marketing Honey," by Edward G. Brown was read by Dr. Phillips.

The paper, "Breeding Bees," by G. B. Howe was read by E. R. Root.

EVENING SESSION—FEBRUARY 17, 1915

Vice President Frank C. Pellett in the chair

The paper, "Straining and Clarifying Honey," by H. H. Root was read.

The paper, "The Advertising Value of Apiarian Exhibits at Fairs," by George W. York was read.

(No further proceedings of the evening meeting of February 17th available.)

DELEGATE SESSION—FEBRUARY 18, 1915, 8:00 A. M.

Meeting called to order by Vice-President, Frank C. Pellett.

The new constitution and incorporation were taken up and debated.

Motion by Dr. Phillips and carried: That the delegates remain in continuous session until midnight, February 18th, unless adjournment is made sooner by unanimous consent.

Moved by Dr. Phillips and carried: That debate be limited to five minutes on each subject.

Moved by Mr. Millen and carried that the transaction of business be deferred until the return of Dr. Gates.

Dr. Gates in the chair.

The Secretary was instructed to read the proposed by-laws. Mr. Baxter refused to sign them and it was deemed unnecessary.

Mr. Williams read the following motion drafted by Frank C. Pellett that the proposed by-laws be adopted as read. Moved by Frank C. Pellett and carried that the above motion be adopted.

Moved by Frank C. Pellett and carried to ballot for the adoption of the Constitution as a whole.

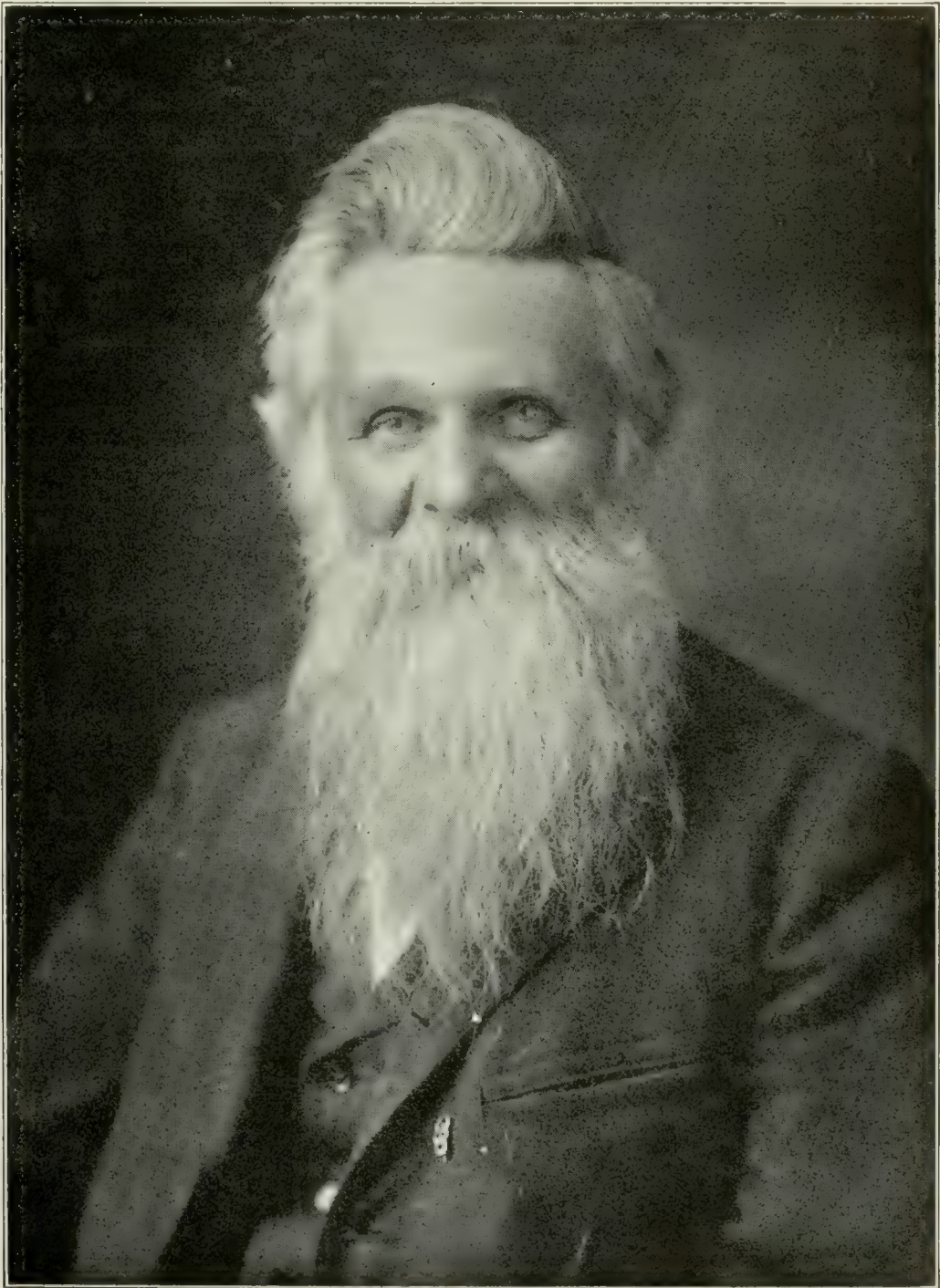
Moved by Mr. Jager and carried to make it a matter of official record that a copy of the by-laws, present or available, be placed on file with the President of the Association.

Moved by Mr. Baxter and carried that a recess be taken.

Moved by Dr. Bohrer and seconded that the amount of indebtedness be given by the Secretary and be assumed. Motion withdrawn.

Dr. Phillips took the floor and remarked that they had reached the point where they would now have to disband or re-organize.

Mr. Baxter presented the following resolution: Whereas, the



Director E. J. Baxter, Nauvoo, Ill. Elected at Denver, February, 1915

National Beekeepers' Association, a voluntary organization, proposes to disband, and Whereas, the members of said organization have applied for membership in this Association, Therefore, Be It Resolved that the members of the voluntary organization and the same are hereby declared to be members of this Association and entitled to the rights and privileges thereof.

Moved by Dr. Phillips and carried that the delegates withdraw to the back room. The Chair appointed Mr. N. L. Henthorne to conduct the public session.

DELEGATE SESSION—11:30 A. M.

Mr. E. J. Baxter nominated Dr. Gates for President of the Association. Dr. Gates asked that another nominee be considered and Mr. Foster placed the nomination of F. C. Pellett.

Moved by Mr. Baxter and carried that the Secretary cast a unanimous ballot for Dr. Gates.

Mr. F. C. Pellett nominated for Vice President. Moved and carried that the Secretary be instructed to cast a unanimous ballot for Mr. Pellett.

Mr. Wesley Foster and Mr. G. W. Williams were nominated for Secretary-Treasurer. Moved by Mr. Williams and granted by unanimous consent that the ballots be not counted and that the Secretary cast a unanimous vote for Mr. Foster for Secretary-Treasurer for the ensuing year.

Mr. Williams asked as a matter of formality to accept the proposition of the members of the dissolved National Beekeepers' Association, unincorporated, to become members of the National Beekeepers' Association, incorporated, in conformity with the provisions of its corporation.

Moved by Mr. Pellett, seconded by Mr. Baxter, and carried by a rising vote that the appreciation of the Association for services rendered be extended to Mr. Williams.

The election of three Directors was the next order of business.

Moved and carried that the Secretary cast a unanimous ballot for Mr. Townsend for Director.

E. J. Baxter, J. H. Stoneman, Francis Jager and Dr. E. F. Phillips nominated for Directors. Mr. Jager and Dr. Phillips withdrew. Mr. Baxter and Mr. Stoneman elected.

The following resolution presented by Dr. Phillips, was adopted:

Whereas, Mr. E. D. Townsend has served the National Beekeepers' Association faithfully as Editor of the official organ (The Beekeepers' Review) and as Director.

Whereas, There has not been a unanimous opinion as to the policies of the Association and as to the desirability of the continuation of "The Review,"

Resolved, That the delegates desire to explain to Mr. Townsend that any criticism which may have been made was in belief in his absolute integrity, and they further desire that he understand that they have not failed to value his services, nor have they questioned his faithfulness as an official of the National Beekeepers' Association.

Resolved, That the Directors express to Mr. Townsend their regret that he could not be present.

Mr. Millen gave Mr. Townsend's view on the subject of membership fees and asked that "The Review" be allowed to be sent to members and those not members and that the fees be \$1.50 instead of \$2.00. Moved by Mr. Millen and carried to amend Section 5 by making the annual fees \$1.50 of which \$.50 should be applied to the general fund and \$1.00 be applied to the subscription fund.

The following resolution, presented by Dr. Phillips, was adopted:

Whereas, It may be that certain details have been overlooked in the re-organization of the National Beekeepers' Association, or have been acted upon in some way not in accord with the laws of Illinois under which the Association was incorporated.

Resolved, That the delegates in session authorize the Executive Committee so to rectify or change any such actions that they will be legal and to conform, as nearly as possible, with the actions of the delegates in session.

Moved by Mr. Jager and carried to thank the old officers for the performance of their duties during the incumbency of office.

The Constitution of the old Association was read by Mr. Williams.

The Chair made the following ruling, which was sustained: That the National Beekeepers' Association, unincorporated, has duly petitioned the National Beekeepers' Association, incorporated, for full membership, and in due time the National Beekeepers' Association, unincorporated, will be duly recognized.

Dr. Phillips presiding at 7:00 p. m.

Moved and carried that the First National Bank of Boulder, Colorado, be designated as the depository of the National Beekeepers' Association, but with the consent of the Board of Directors.

Prof. Jager reported for the Resolutions Committee. (See

copy of committee reports).

In regard to the importation of denatured sugar free of duty for bee feeding, Prof. Jager explained the Austrian method. He further emphasized the need for action to secure the same in this country. Discussion followed.

Moved by Dr. Phillips and carried to strike out the denatured sugar clause and refer the matter to the Executive Committee.

Moved and carried that the report of the Resolution Committee be adopted with the above exception.

Moved and carried that the Executive Committee ascertain the deaths of prominent bee-men and add proper resolutions to the body of the resolutions already adopted.

Dr. Phillips opened the discussion of the importation of honey. Mr. Root and Mr. Rauchfuss spoke on the large importations of dark grade honey into the United States.

Mr. Williams read the following resolution, endorsed by fifteen beekeepers owning 6,000 colonies of bees:

Whereas, The honey market is in an unsatisfactory condition, and it is desirable that every effort should be employed to encourage the further use of honey in every legitimate way,

Therefore, Be It Resolved, That the Directors be instructed to take such measures to encourage the publicity of honey and use of the same as they find proper within the financial limits of the Association.

Moved by Mr. Williams, seconded by Mr. Phillips, and carried that the above resolution be adopted.

Moved by Dr. Phillips and carried that the former President's report be referred to the publishers of "The Review" for publication.

Moved by Mr. Williams and carried that the Secretary secure the records and papers of former years.

Effort was made by the Chair to offer opportunity to clear up any obstructions, or call forth suggestions for the future.

Moved by Dr. Phillips and carried that all and any criticism of any action of the old officers be stricken from the records and that acknowledgement of error be made in the meeting, and all charges against any officer or delegate be withdrawn.

Moved and carried that the papers on "The Marketing of Honey" read at the National Beekeepers' Association Convention be published in a special issue of "The Beekeepers' Review."

Discussion of exhibits at the fairs.

(CONTINUED IN JUNE REVIEW)

THE HUM OF THE BEES

(By David Hall)

In the warm summer time, with a
beautiful show
Of bright flowers with nectar well
filled,
It is pleasant to think of the gen-
erous flow
The warm rains and the dews have
distilled.

It is then to the bee-yard we frequent-
ly go,
Just to hear the sweet hum of the
bees,
As they haste to the fields where the
white clovers blow.
Or perhaps to the tall linden trees.

How the heart warms with gladness,
the pulse, too, is stirred
As the bees with a rush and a roar
Speed away in their haste with a
sound plainly heard,
In quest of their sweet winter's
store.

The glad hum of the bees has a musi-
cal sound
Like a song with a joyous refrain
And each year as the genial spring
comes around
We are anxious to hear it again.

In good faith let us trust as the years
come and go
There will be enough sunshine and
showers
That will give the beekeeper a boun-
tiful flow
Of pure liquid sweets from the
flowers.

Quickly filling the supers with snowy
white combs
With enough in the broodnest below
To sustain in abundance the bees in
their homes
Till the bloom of the apple trees
show.

Thus making the heart of the bee-
keeper glad,
With a sweet recompense for his
toil,
To his banking account quite substan-
tially add
What the farmer digs out of the
soil.

Try the Review Classified depart-
ment.

How the Bees Have Wintered

We herewith submit a few reports of how the bees have wintered. As it is human nature to report success and when losses occur, say nothing about it, we may expect that the following reports are somewhat above the average wintering. To illustrate: We know of four different beekeepers who put in winter quarters four hundred colonies that have lost 75 per cent of them. Those yards are located in Ohio and Michigan, that did not report for publication.

Presque Isle, Maine, April 20th.

The Beekeepers' Review:—

I wintered my 62 colonies in a concrete cellar, and at this writing, find them in fine shape. I winter with the bottom board removed. My 40 colonies did fine last season. Our main honey flow is clover and raspberry.

Yours very truly,

MRS. ALICE J. PULCIFER.

Fisher, Ark., April 21st.

Editor Review:—

We have had a very bad winter on bees here, but the bloom is now on and the worst is over.

Yours truly,

GEO. GORDON.

Decatur, Ill., April 12th.

The Beekeepers' Review:—

Bees came through the winter in fine shape on aster honey. March was a poor month for bees to breed well. April has been fine so far with rain and warm weather. A considerable pollen being gathered from willow and forest trees.

White clover is nearly all dead, the past two years being so dry.

Some sweet clover which looks fine. We hope for enough rain to insure a fall crop from smartweed and aster.

Yours very truly,

G. E. MOORE.

Chittenango, N. Y.

Editor Review:—

Bees have wintered with but small loss. There is the least brood in the hives I ever knew at this time of the year. Honey nearly used up in many colonies.

Yours truly,

BURDETT HALL,

Rochester, Ohio, April 14th.

Editor Review:—

The indications are for a good honey year. The bees are building up fast. All colonies came through the winter in good shape. Our principal honey flow is from clover and basswood, although the latter is getting mostly cut off. Last season my thirty colonies averaged one hundred pounds per colony. (Estimated).

Yours truly,

C. H. HODGKIN,

Springfield, Ont., March 31st.

Editor Review:—

I report that bees in Ontario have had a very hard winter. Experienced beekeepers fed last fall and their bees have wintered well. The amateur did not feed, owing to the expense after the season's crop failure and hundreds of colonies have perished for want of stores. Have only lost one small nucleus thus far and this never should have been put into winter quarters, but should have been united. We are looking forward to a good season.

Yours very truly,

(REV.) HERBERT WALTZ.

Dorset, Ohio, April 1st.

The Beekeepers' Review:—

We are having quite severe losses in bees in this locality. We have 104 dead at this date, out of 409, and in this locality the losses cannot be counted until May 1st.

The losses are due to a September honey flow from asters and golden rod.

Yours truly,

B. J. HOLDEN.

Parksville, N. Y., April 12th.

The Beekeepers' Review:—

Bees that were taken care of have wintered well here. Some who did not care for them last fall have lost nearly all. One man with about 125 colonies, nearly all dead.

Yours very truly,

A. W. SMITH.

Littlestown, Pa., April 12th.

Editor Review:—

My bees came out unusually strong this spring. Out of 40 colonies two died, do not know the cause, probably poor queens, could not give them proper attention last fall on account of the serious illness of both my aged parents (which resulted in their death recently only a few days apart), wintered outside largely on stores gathered in the fall.

Our main reliance for crop is locust and clover. The clover has frozen out badly, but at this writing just after a heavy rain, the prospect for a clover crop seems fairly good.

Yours truly,

C. F. BUCHER.

Dixon, Iowa, April 12th.

The Beekeepers' Review:—

Bees have wintered well. Clover in good shape, and a good stand.

Yours truly,

E. A. DONEY.

Bellevue, Ohio, March 25th.

Editor Review:—

Bees are not wintering quite so well as they ought, considering the mild winter. We attribute this to the dry fall, but little late brood being reared, nothing but old field bees going into winter quarters and with a light brood nest. However, outside the nuclei we have had but little loss in our own yards.

Yours truly,

QUIRIN-THE-QUEEN-BREEDER.

Clarkston, Mich., April 9th.

The Beekeepers' Review:—

Bees are fairly strong with us this spring. They gathered the first pollen the 6th of the month. Take the whole township in general, there has been about 45 per cent winter loss. Prospects look good for a crop this year.

Yours very truly,

W. L. LOVEJOY.

Whittemore, Mich., April 13th.

The Beekeepers' Review:—

My bees have wintered fairly well. Have lost six colonies out of ninety. Four of the dead ones were queenless. I did not feed sugar syrup last fall and I expected a heavy loss, as their stores were mostly buckwheat and fall honey, a kind that candies white in the combs, (Aster. Ed.) I wintered them out of doors in double walled hives, with a high board fence all around them. Have had some heavy losses with apparently the same kind of stores, and I began to suspect honey dew.

Yours very truly,

EDWARD WILSON.

(Neighbor Wilson:—Your trouble in wintering is a serious one, but you are likely mistaken about its being honey dew. It is likely just plain Aster that has caused your previous losses. The remedy is so simple that I hardly need repeat it here, but I will. Extract the honey at the close of the season and feed sugar syrup, and your troubles will disappear. Ed.)

Blackfoot, Idaho, April 16.

Editor Review,

Northstar, Mich.

Bees have wintered very good with the exception of some yards not properly protected from the cold, many of them starving to death with honey on either side and in many cases in the other end of combs that bees were on. In many cases the entrance frozen up with ice and dead bees thus preventing the bees from getting fresh air or flying out when the weather would permit. In such cases the bees are badly affected with dysentery and many are found dead, scattered all through the hive showing unmistakable evidence of having been trying to find a way to get out of their unsanitary confinement.

A few yards have lost about 50 per cent. The average will be about 12 per cent, while mine will not be over 7 or 8 per cent. Bees have been flying nearly every day since February 15th. But not until April 7th did they commence gathering natural pollen.

(The exact date ours here in Central Michigan brought in the first pollen. E. D. T.)

It looks now as if it would be a good season for early increase; what the crop will be we don't know. If conditions are right the bees will get honey off of a barb wire fence, and if conditions are not right we may have an abundance of bloom and millions of bees, but no honey comes in.

Have just read George W. Williams' article in the April Review under the heading "Booster Club," and think he hits the nail square on the head. We need more such men as Mr. Williams.

Yours very truly,

J. H. STONEMAN.

April 1st, 1915, Statement of Ownership, Management, Circulation, etc., of the Beekeepers' Review published monthly at Northstar, Michigan, required by the Act of August 24, 1912.

Managing Editor—E. D. Townsend, Northstar, Mich.

Business Manager—E. D. Townsend, Northstar, Mich.

Publisher—The National Beekeepers' Association, Northstar, Mich.

Owners—The National Beekeepers' Association, Northstar, Mich.

Known bondholders, mortgagees, or other securities: The National Beekeepers' Association purchased the Beekeepers' Review on a contract from E. B. Tyrrell, Detroit, who now holds said contract.

Signed,

E. D. TOWNSEND.

Sworn to and subscribed before me this 1st day of April, 1915.

F. L. COSS, Notary Public.

My commission expires March 17, 1918.

Advertise your wants in the Review, the Beeman's own paper.

THE BEEKEEPERS' REVIEW, THE BEEMEN'S OWN PAPER. DO YOU PATRONIZE IT AS YOU SHOULD?

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON, Ontario, Ore.

FOR SALE—Fancy orange-blossom honey. Send for price list. JAMES McKEE, Riverside, Calif. tf

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

FOR SALE—Twelve tons of wild buckwheat and blue curl extracted honey in 60 lb. cans. For particulars and price write M. J. Sain, Hanford, Calif.

FOR SALE—Carload ext. light amber Alfalfa Honey. In June also ext. Orange Blossom Honey. In new 5-gal. tins, 2 per case. Sample 10 cts. Otto Luhdorff, Visalia, Calif.

FOR SALE—Extracted Honey, Basswood and light Amber in 10 lb. pails. Can be sent parcel post. Write for prices. E. E. MOTT, Glenwood, Mich.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIREs, North Yakima, Wash.

FOR SALE—Fine well ripened white clover honey in 60 pound cans. also in 10 pound pails. Write for prices. D. H. WELCH, Racine, Wis.

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. BEEBE, Mosinee, Wis., Route No. 1.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

CHICAGO—The market has cleaned up on comb honey to a degree that is seldom reached at this time of the year, and we believe that this is not only true of Chicago, but of every large market in the country. Therefore, the coming crop should meet with a good demand and prices quite as high as the market closed at, for of late, white comb honey has sold at 17c to 18c per lb. without allowing for the weight of the wood attached. A little fancy brought 20c per lb. after allowing for the weight of the wood. The fact of all grades of comb honey having been consumed should open the way for a free outlet of this coming harvest even though it prove to be a bumper one.

Extracted honey on the contrary is in abundance and the lower grades are very difficult to sell. White clover and basswood have been used up and commands 9c per lb. in our market now, but other white grades are selling at 7c to 7½c per lb., while the ambers can be bought freely at 6c per lb. and off flavors at a still lower price.

Beeswax is steady at 30c to 31c per lb.

R. A. BURNETT & CO.,
173 W. South Water Street.

POULTRY

White Wyandottes and Buff Orpington eggs: \$1.00 per 15, \$5.00 per 100. Healthy, vigorous stock. G. M. Withrow, Mechanicsburg, Ill.

FOR SALE — Buttercup hatching eggs. Champion layers of extra large pure white eggs, larger than Leghorns and eat only half as much. 15 hatching eggs, price two dollars. Thoroughbred stock, for sale cheap. Tom Barron's English White Leghorns, world's champion layers, six times winners in great laying contests such as the state poultry experiment stations at Mountain Grove, Missouri, and Storrs, Conn. Not show birds but the world's best for egg production. 15 hatching eggs, price \$3.00. HENRY WOODWORTH, Box 505, Cheboygan, Mich.

BEEs AND QUEENS

FOR SALE—600 stand of bees and 9 acres Alfalfa farm. No crop failures. Yours at a bargain. J. M. RUYTS, Carlsbad, N. M.

BEEs FOR SALE—100 colonies. J. H. STONEMAN, Box 264, Blackfoot, Ida.

QUINN'S QUEENS OF QUALITY—Grey Caucasians, the long tounge (6.66 m. m.) bee Mendelism does it. Gentlest of all bees. CHAS. W. QUINN, Box 389 Beaumont, Tex.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

THREE BANDED ITALIAN QUEENS — Also "Golden Beauties" and Carniolans. Tested, \$1.00; untested, 75c each. Bees by the pound and queens in quantities. Write for prices. PAGE BANKSTON, Buffalo, Texas.

GOLDEN, 3 Band and Carniolan queens. Tested, \$1 each; 3 to 6, 95 cts., 6 or more 90 cents each. Untested, 75c., 3 to 6, 70c., 6 or more 65 cents each.

Bees per pound\$1.50
Nuclei per frame 1.50

Ready to go April 1st. Address C. B. BANKSTON, Buffalo, Lion Co., Texas. tf

FOR SALE—Queens, Three Band Italians. Extra good strain. These bees are great hustlers. Only select drones near mating yard. 1 Unt. \$1.00, 6 for \$4.50, \$8.00 per 12. Ready June 15th. D. G. LITTLE, Hartley, Ia.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to Introduce Queens" 15c. "How to Increase," 15c, both 25c. Untested queen \$1.00. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich

A FINE APIARY IN N. MICHIGAN FOR SALE—300 colonies with full modern outfit for extracted honey production, in one of the best honey locations in Northern Michigan, with unlimited range for additional apiaries. Reason for selling poor health and much sickness in my family. Bees are in fine shape, never had foul brood. Address O. H. TOWNSEND, Butterfield, Mich.

SOLD OUT—The party who advertised his bees and home for sale last month under the caption "old age," has sold out at \$50 more than the price mentioned, and if he had held the property another day, could have sold for \$200 more. So many letters were received from his small liner in the Review and he was so well pleased with the results that he sent us \$5 requesting that we tell the many intending purchasers that he was sold out and this to be the answer to the many letters received. The Review is one of the very best mediums to advertise bees in, as it circulates among the better class of producers who do business upon business principles. Help yourself, the fraternity and the Review by patronizing our advertising columns.

BEST THREE BANDED ITALIAN QUEENS—June to October, mothers selected from more than 100 colonies and reared in hives running over with bees, according to the latest scientific methods. Every queen a dandy. Satisfaction guaranteed. Each, 75 cents. Per doz. \$7.20. Per hundred \$50.00. Also Bees and Honey J H. HAUGHEY, Berrien Springs, Mich.

GOLDEN or Three-banded Italian Queens ready the first of April.

Tested Queens, each\$1.00
6 or more, each85
Untested, each75
6 or more, each65

Special prices on long orders. Everything guaranteed. I. N. BANKSTON, Buffalo, Texas. tf

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5 $\frac{3}{8}$ in. depth supers nailed and painted (220-10 fr. 40- 8 fr. ext. sup. 5 $\frac{3}{8}$ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address Wm. McKIBBEN, Ontario, Ore.

500 SAMPLE QUEENS at 40c on first 500 orders. Moore's Strain Leather Covered Italians. Write for particulars and prices in quantity. April and May orders booked now on 10 per cent deposit. Orders filled promptly, or notice given when such deliveries can be made. Regular prices: Untested Queen, \$.75, Six \$4.25; Twelve, \$8.00. OGDEN BEE & HONEY CO., Ogden, Ut., Timberling Riggs Breeder , tf

QUEENS—California queens, nuclei, and bees bred from the best Doolittle stock, ready for shipment at once. Queens, untested, 75 cts; per dozen, \$8.00; tested, \$1.25; per dozen, \$12.00; mismated, one year old, 50 cts.; per dozen \$5.00; tested, one year old, 75 cts.; per dozen, \$8.00; nuclei, two-frame, \$1.50; three-frame, \$2.25; five-frame, \$3.00; ten-frame colony, \$4.50. Bees by pound: One-half lb., 75 cts.; 1 lb., \$1.00. Add prices of queens desired to all above prices of bees and nuclei. Delivery guaranteed. No disease. Address SPENCER APIARIES CO., Nordhoff, Cal. tf

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each have for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Wilmer Clark, Easleyville, N. Y.—150.
A. S. Crotzer, Lena, Ill.—94.
G. M. Withrow, Mechanicsburg, Ill.—25.
L. R. Beebe, Mosinee, Wis.—200.
Wm. McKibben, Ontario, Ore.—160.
Wilmon Newell, College Station, Tex.—100.
The E. F. Atwater Co., Meridian, Ida.—50 to 300.
O. H. Townsend, Otsego, Mich.—300
Robert Gladstone, St. Louis, Mich.—50.

BEES AND QUEENS—During spring and summer months we requeen all our two thousand colonies to prevent swarming. The queens removed from these hives are only one year old and of best of Italian Stock. We offer these queens at 50c each, \$5.40 per doz. Satisfaction guaranteed or money back. No disease. **SPENCER APIARIES CO.**, Nordhoff, Cal.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. **PEARL CARD CO.**, Clintonville, Ct.

WANTED—Beeswax at 31c per lb. **JOHN O. BUSEMAN**, 4141 N. 7th St., Philadelphia, Pa.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. **WHITE MFG. CO.**, Greenville, Tex.

WANTED—One or two good able bodied young men as students with me in my bee business. Please apply at once. Address **O. H. TOWNSEND**, Butterfield, Mich.

WANTED—A location for 120 colonies of bees, also additional bees to work on shares. Ten years' experience. Best of reference. Southern Wisconsin preferred. Address **LOCATION**, care Beekeepers' Review.

LEWIS BEEWARE—Root's Extractors, smokers, etc.—Dadant's Comb Foundation. Large stock always on hand for prompt shipment. Western Beekeepers can save money by patronizing the oldest co-operative association of beekeepers. Illustrated catalogue free. **The Colorado Honey Producers' Association**, Denver, Colorado

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using **Eureka Paste**. Address **THE BEEKEEPERS' REVIEW**, Northstar, Michigan.

CALIF. Redwood beehives, one story with top and bottom 85c each, supers 25c each, frames 1½c each. Discounts 100 or more 10 per cent. Extracted honey cases 65c each. Medium brood foundation delivered by pre-paid freight anywhere in the U. S. 25 lbs. 60c., 50 lbs. 56c., 100 lbs. 52c Other grades in proportion. Highest prices paid for wax. Special discounts on our supplies, catalogue free. **SPENCER APIARIES CO.**, Nordhoff, Cal.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the **U. S. MAILING CASE CO.**, Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

BOOKS ON PRACTICAL BEE CULTURE

Mailed Post Paid Upon Receipt of Price

A B C and X Y Z of Bee Culture, cloth	\$2.00
A B C and X Y Z of Bee Culture, half leather	2.75
A B C and X Y Z of Bee Culture, German	2.50
A B C de L'Apiculture, French ed.....	2.00
El A B C and X Y Z de la Apicultura, Spanish	2.50
Langstroth on the Hive and Honey Bee Reprint	1.00
Advanced Bee Culture, W. Z. Hutchinson	1.00
Biggle Bee Book .....	.50
British Beekeepers' Guidebook, Cowan..	1.00
Cook's Manual of the Apiary	1.15
Doolittle's Queen-rearing	1.00
Fifty Years Among the Bees, C. C. Miller	1.00
First Lessons in Beekeeping .....	.50
Honey Bee. The—Cowan	1.00
How to Keep Bees—Mrs. Comstock	1.00
Humble Bee, The—F. W. L. Sladen....	3.25
Irish Bee Guide, Rev. J. G. Digges.....	1.00
Langstroth, Rev. by Dadant, cloth	1.25
Modern Bee Farm, S. Simmins	2.00
Quimby's New Beekeeping	1.00
Wax Craft	1.00
Increase Forcing the Queen to Lay; each	.25
French edition, separate .....	.50

POPULAR BOOKS ON BEE CULTURE

Bee People, The, Margaret M. Morley...	\$1.50
Children's Story of the Bee	2.00
Honey Makers, The, Margaret M. Morley	1.50
Life of the Bee, Maeterlinck	1.40
Bee Master of Warrilow, The—Edwards	.57
Lore of the Honey Bee	2.00
Queenie .....	.75
Bee Models	each 50c; 2 for .75

Address All Orders

THE BEEKEEPERS' REVIEW

Northstar, Michigan

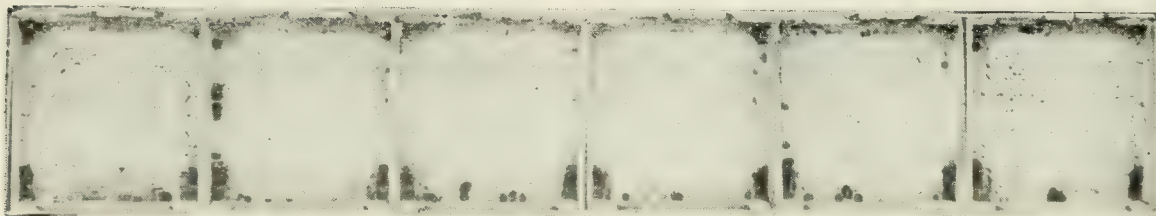
Ladies we need the cash!



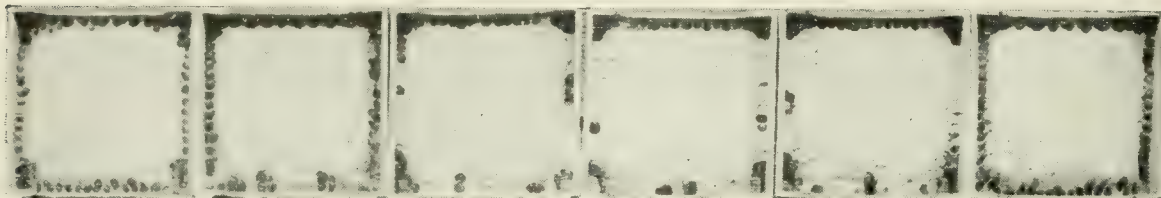
59¢ for a \$1.50 Waist means 91¢ to YOU

10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 seller must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four Your money refunded if not satisfied.

GENERAL SUPPLY CO.
168½ BZ Delancey Street
New York City



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.
2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.
3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.
4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

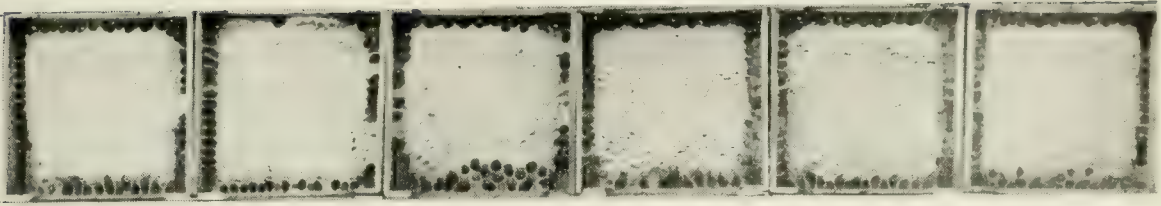
III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.
3. **LIGHT**—No section designated as light to weigh less than ten ounces.

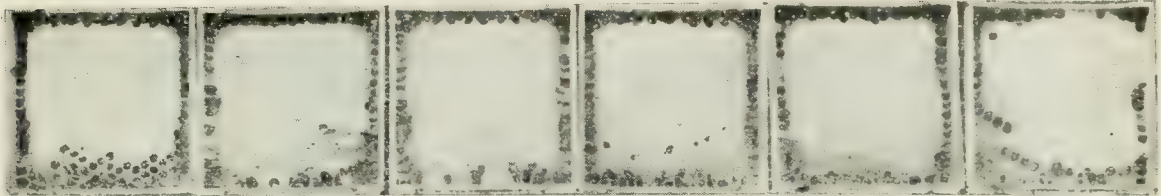
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

COMB HONEY

Fancy:

Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than $12\frac{1}{2}$ oz. net, or $13\frac{1}{2}$ oz. gross. The top of each section in this grade must be stamped, "Net weight not less than $12\frac{1}{2}$ oz."

The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number One:

Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber in color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number Two:

This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES

Honey packed in second hand cases.

Honey in badly stained or mildewed sections.

Honey showing signs of granulation.

Leaking, injured or patched up sections.

Sections containing honey dew.

Sections with more than 50 uncapped cells, or a less number of empty cells.

Sections weighing less than the minimum weight.

All of such honey should be disposed of in the home market.

EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W", "L. A.", "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES

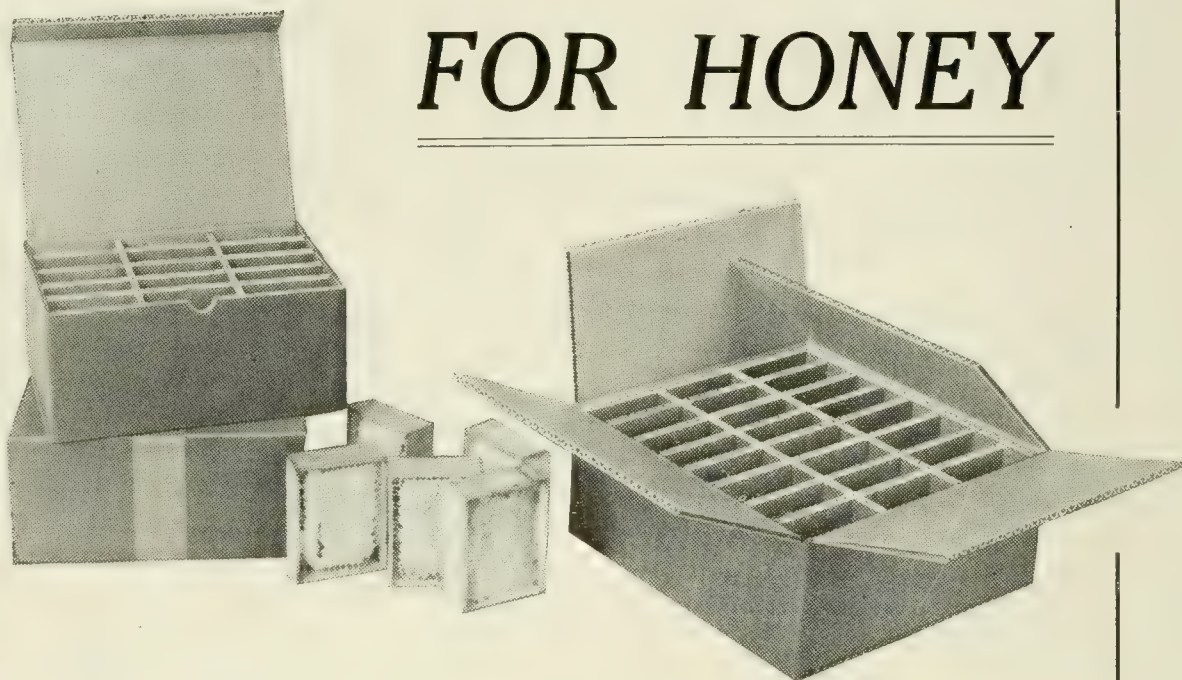
Extracted honey packed in second hand cans.

Unripe or fermenting honey, weighing less than 12 lbs. per gallon.

Honey contaminated by excessive use of smoke.

Honey contaminated by honey dew.

Honey not properly strained.



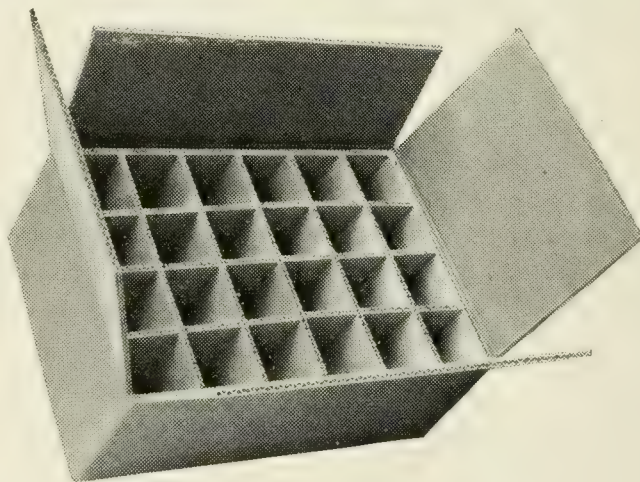
FOR HONEY

H. & D. Corrugated Fibre Boxes

Are used and highly recommended by the most progressive shippers. Their strength and lightness are wonderful. Shipped folded flat.

They are—

Economical
Convenient
Compact
Damp-proof
Dirt-proof
Secure against
Pilfering



Write for Illustrated Catalog and Manual
"HOW TO PACK IT"

The Hinde & Dauch Paper Company

Canadian Trade
Address Toronto, Ont.

Sandusky,
Ohio

Working Beeswax

In order to encourage our customers in securing as much beeswax as possible for foundation purposes, we offer to work it into foundation for them at the lowest prices. Below we give the prices for working not less than

	500 lbs.	300 lbs.	100 lbs.	50 lbs.	25 lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one cent per pound for packing in assorted cartons.
Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

These prices are so close that we must have SPOT CASH for working the wax as above. NO DISCOUNTS from these prices.

N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acid.

Subscriber kindly ship your wax to the foundation manufacturer you prefer to have it made by, marking it "Subscriber" also, put your mark on the packages so your wax can be recognized and mail the bill of lading, also the amount of money necessary to pay for the making of same and mail to this office. For this favor we will take a dollar of our profits and pay for a year's subscription to the REVIEW which will be placed to your credit.

There is one exception: If you send in 500 pounds or more of wax, you will then be entitled to the lowest rate, in which case we cannot allow you a commission.

We have thus far made arrangements with the following manufacturers of Foundation to do our work: Dadant & Sons, Hamilton, Ill.; The A. I. Root Co., Medina, Ohio.; Gus Dittmer Co., Augusta, Wis.; W. T. Falconer Mfg. Co., Falconer, N. Y. (Inclose a cent a pound more than above quotations when sending your wax to the Falconer Mfg. Co.); Madary's Supply House, 733-735 Aliso Street, Los Angeles, Cal. Arrangements with other manufacturers being negotiated.

Address with remittance and bill of lading to

THE BEEKEEPERS' REVIEW
NORTHSTAR - MICHIGAN

Pack your wax in double sacks.

Use no paper or other packing.

W. H. LAWS

Will be ready to take care of your Queen orders whether large or small, the coming season. Twenty-five years of careful breeding brings Law's Queens above the usual standard; better let us book your orders now.

Breeding Queens—A large number of kind queens, tried and tested as breeders, each \$5.00

6 Breeding queens.....	\$25.00
1 Untested queen.....	90
12 Untested queens.....	9 00
100 Untested queens.....	70.00
1 Tested queen.....	1.00
12 Tested queens.....	10.00
100 Tested queens.....	85.00
1 Selected Tested queen.....	2.00
12 Select Tested queens.....	18.00
56 Select Tested queens.....	50.00

W. H. Laws, Beeville, Texas

"Here is the Answer," in WEBSTER'S NEW INTERNATIONAL

THE MERRIAM WEBSTER

Every day in your talk and reading, at home, on the street car, in the office, shop and school you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *fujutsu*. What is *white coal*? This New Creation answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority*.

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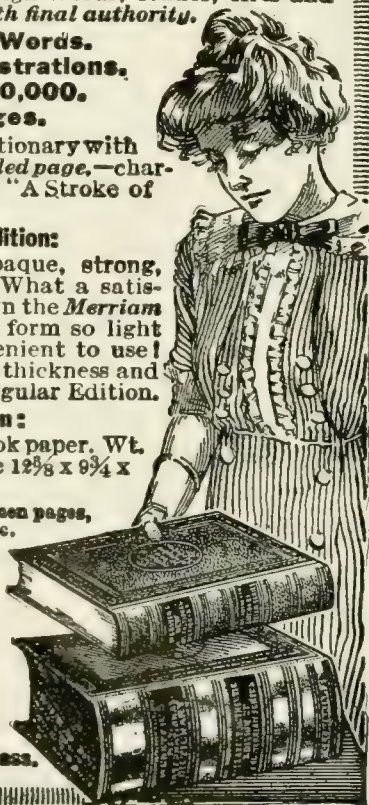
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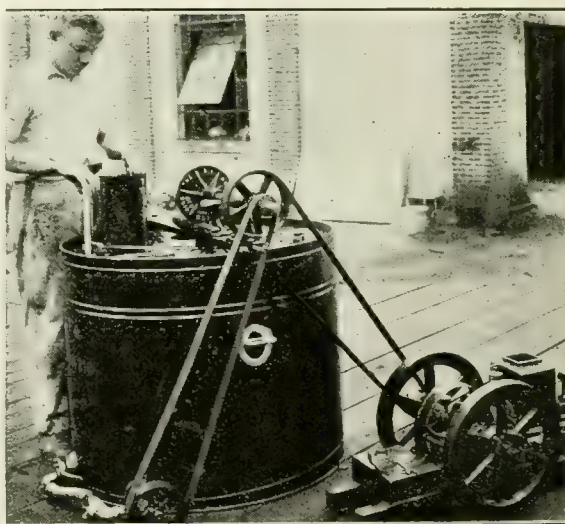
One year's subscription to the official organ—The Beekeepers' Review. \$1.00.

Dues in both National and your Affiliated Association. \$1.00.

Mail \$2, no more or no less, to Sec. Wesley Foster, Boulder, Colo., or to your local secretary, or, if more convenient, to this office.

FOR SALE—40 cases of "TOWNSEND'S Ultra-Quality" Clover-basswood blend of extracted honey. All other sold.

Install a **ROOT AUTOMATIC EXTRACTOR** and **HONEY PUMP**, then run them with a **NATIONAL 1½ H P. ENGINE** and you will then have an outfit "par excellence" to do your extracting with.



Root Automatic Extractor, National Engine and Honey Pump in Position.

A one inch galvanized pipe, threaded with elbows, transfers the honey from the pump to the honey tank at one side.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and everything necessary pertaining to the outfit at \$86.50.

Six-frame extractor outfit as above at \$93.50 eight-frame extractor outfit as above, but containing a one inch pump, instead of the ¾ in. pump listed above \$104.50 If wanted without pump, deduct \$18.00 for ¾ in. pump and \$22.00 for 1 in. pump.

These prices are for the very latest Friction driven machines. If you should order an engine without the extractor, kindly say whether the gear of your extractor is 1 to 1 or 2 to 1 then we will order the suitable pulley.

The above prices are List, from which a considerable discount is made to subscribers.

THE BEEKEEPERS' REVIEW
Northstar, Michigan

"Falcon"**Bee Supplies**

SHIPPING CASES, EXTRACTORS,
HIVES, ETC. EVERYTHING
FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

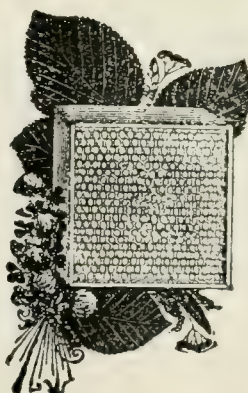
Where the Good Bee-Hives
Come From

**"The Pearce Method
of Beekeeping"**

The Pearce method of Beekeeping is now being revised and brought up to date. The first edition of 5000 copies have been some time out of stock and Mr. Pearce is now rewriting the entire work and bringing it up to the very minute. It will be the same size as the old volume, but contain many more pages. The new work will be ready for delivery by early spring. Price 50c post paid, or clubbed with a year's subscription to the Review for only \$1.10.

Address

The Beekeepers' Review
Northstar, Michigan

National Writing Paper and Envelopes for the Subscribers

We are now better prepared than ever to furnish the members, or subscribers with their writing paper and envelopes. The paper headings will contain the new Officers and Directors of the National elected at the Denver meeting in February. The envelopes will be printed with return card as usual. Paper and envelopes can be printed with either of the three cuts shown above. In ordering, mention which is preferred.

We quote 250 Envelopes, post paid for\$1.50

We quote 250 Paper, post paid for 1.50

If you prefer to have your printing done at home, we can furnish you with any of the above cuts to print from at only 50c each, postpaid. Address

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GRAY CAUCASIANS

Their superior qualities are early breeding; great honey gatherers; comb honey cappings being beautifully white; very prolific; very gentle; great comb builders; not much inclined to swarm; give better body to their honey; not much inclined to rob; very hardy; never furious, good winterers everywhere; the best all-purpose bee. Send a trial order for a queen or nuclei and be convinced. Prices on application.

J. J. WILDER, Cordele, Ga.

The Pearce Method of Beekeeping

I am rewriting, revising and enlarging the Pearce Method of Beekeeping. It was my intention to have it put out by the first of March, but owing to a spell of sickness it was delayed, but will be out on or before the first of May. Order now! The price, 50c, will be the same as the first edition.

ADDRESS J. A. PEARCE, Route 1, Grand Rapids, Mich.

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

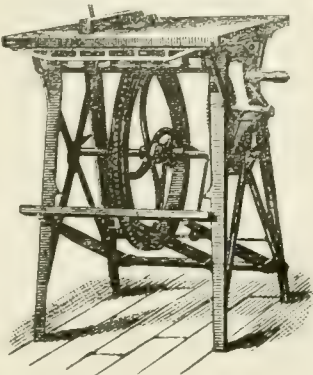
- 1 gallon can, including mailing case, per crate of 50.....\$5.50
- 1 1/2 gallon can, including mailing case, per crate of 100..... 9 50
- 1/4 gallon can, including mailing case, per crate of 100..... 7.50
- 1/2 gallon square round cornered syrup cans, 1 3/4 in. screw cap, per crate of 100..... 5.50
- 1/4 gallon square round cornered syrup cans, 1 3/8 in. screw cap, per crate of 100..... 4.00

We cannot furnish less than a full crate of the above at any price.

If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

Address all orders to the
BEEKEEPERS' REVIEW
Northstar, Michigan



MAKE YOUR OWN HIVES

Bee-Keepers will save money by using our FOOT POWER

SAWS

in making their hives, sections and boxes. Machine on trial
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American Bee Journal

ANNOUNCES

Two Big Features--Beginning Jan. 1915

FRANK C. PELLETT, well known lecturer, naturalist and State Inspector for Iowa will write a series of articles well illustrated on "Honey Flora of the United States."

QUEEN REARING IN ITALY. While in Italy last year, C. P. Dadant, had the opportunity to visit a modern queen-rearing establishment. He states that it is the finest and best kept apiary and queen establishment he has ever seen. Full particulars with illustrations in January number,

We Try to Improve With Every Number

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Hamilton - Illinois

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Dr. Miller answers any question asked.

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Hamilton, Ill.

Dear Sirs:

I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Our outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

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Just Now We Offer Attractive Terms on Best Quality
BEE SUPPLIES—Send a list of what you need

DADANT & SONS

Hamilton, Illinois

ANNOUNCEMENT

The annual dues of the National Beekeepers' Association are now \$1.50 in addition to your local dues.

Who Are Now Members

A decree rendered by the delegates at the Denver meeting last month declared all paid-in-advance members of the affiliated associations of the National, members of the National WITHOUT THIS ADDITIONAL FEE BEING COLLECTED. In other words, if you are a member of one of the several affiliated associations, your membership in the National is paid during the life of your membership in the affiliated association.

Who Are Not Members of the National

All previous members of the affiliated associations who are in arrears in their dues, will be required to pay the full fee of \$1.50 per annum.

All persons joining the National Beekeepers' Association since February 19th and thereafter will be required to pay annual dues of \$1.50.

When mailing your one dollar and fifty cents to Secretary Foster, request that he take a dollar of this fee and pay your subscription to the Beekeepers' Review, the official organ of the National Beekeepers' Association, for one year.

If you prefer, you can leave the entire fee in the National Treasury; instead of subscribing for the Review, but the fee is the same in either case.

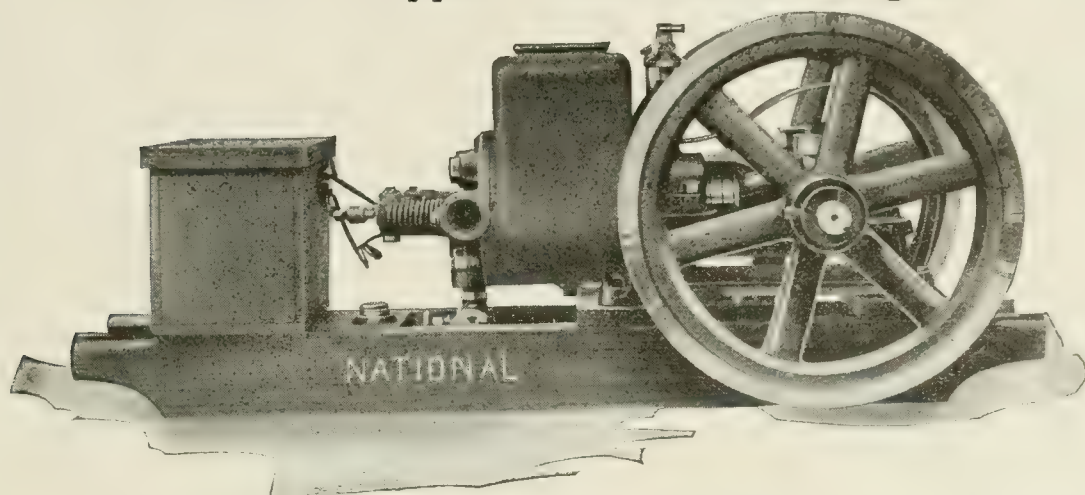
If more convenient, the National annual dues can be sent to your local secretary, or to this office, they in turn handing the fee to National Secretary Foster.

If the members will keep in mind that there has been no National fee for two years past, and that this \$1.50 is in addition to the local dues they have paid during this period, less confusion will occur.

SUMMARY

National dues, are \$1.50; Affiliated association dues, 50c. As you cannot belong to the National, except you belong to one of the Affiliated Associations, and vice versa, the minimum annual dues to the National and Affiliated Associations, are \$2.00, which may include a years' subscription to the Beekeepers' Review.

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, $1\frac{1}{2}$; bore, $3\frac{3}{4}$; stroke, $4\frac{1}{2}$; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, $1\frac{1}{4}$; floor space, 9x36; shipping weight 200.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to The Beekeepers' Review, Northstar, Michigan.

SELL YOUR QUEENS IN CANADA

In the Province of Ontario alone there are 11,000 persons producing honey. A very conservative calculation means that there are 50,000 Queens. If you have Queens to sell the Canadian Beemen, say so in The Canadian Horticulturist and Beekeeper, the only bee publication in Canada. It is the official organ of the Ontario and New Brunswick Beekeepers' Associations.

Classified rate 3c per word—each single number and sign counting as one word. Cash in advance.

Specimen copy on request

The Canadian Horticulturist and Beekeeper
PETERBORO, CANADA

It's a Long Way to Tipperary

But it's a short way to success if your colonies are headed with queens from THE J. E. MARCHANT BEE AND HONEY CO.

Breeders of the highest grade of Island Bred Italian Queens.

Pure mating guaranteed. Prices as following:

	1	6	12		1	6	12
Untested Queens	\$1.50	\$ 7.50	\$12.00	1/2 lb. Bees	.....\$1.50	\$ 7.50	\$12.00
Tested Queens	.. 2.00	10.50	18.00	1 lb Bees	..... 2.00	10.50	18.00
Sel Tested	..... 3.00	15.00	24.00	2 lbs. Bees	..... 3.00	15.00	27.50
Breeders	\$5.00 and \$10.00			3 lbs. Bees	..... 4.00	21.00	36.00
Ext. Sel Breeders	\$25.00			5 lbs. Bees	..... 5.50	27.50	50.00
				These prices are without queens.			

We will ship from Canton, Ohio, after June 1st.

We guarantee safe delivery, and a square deal. WATCH US GROW.

The J. E. Marchant Bee and Honey COMPANY

APALACHICOLA, FLORIDA

BUY YOUR QUEENS

from the man who guarantees every one to be purely mated or your queen replaced.

	Before July 1st			After July 1st		
	1	6	12	1	6	12
Untested	..... \$1.00	\$5.00	\$9.00	\$.75	\$4.00	\$7.00
Select Untested	1.25	6.00	11.00	1.00	5.00	9.00
Tested	..... 1.50	8.00	15.00	1.25	6.00	11.00
Select Tested..	2.00	10.00	18.00	1.50	8.00	15.00
Breeders	..... 5.00			4.00		
1. Comb Nuclei	1.50	8.50				
2. Comb Nuclei	2.50	13.00				

Your choice of either Goldens or Leather Colored queens by return mail. Above prices on Nuclei do not include queen. You are to select such queen as you wish with the bees and add the price.

L. MORRISON

2200 E. 2nd St.

Argenta, Ark.

TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity		Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	.....		\$2.25	\$2.15	\$20.00
2½ lb. Can	.....		2.75	2.60	24.00
3 lb. Can	.....		3.00	2.85	28.00
5 lb. Pail	.....	\$5	4.75	4.50	42.50
10 lb. Pail	.....	7	6.50	6.25	50.00

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans	.....	.71 per case
12 pails in a case, 5 lb. Pails	.....	.65 per case
12 pails in a case, 6 lb. Pails	.....	.70 per case
6 pails in a case, 10 lb. Pails	.....	.49 per case
6 pails in a case, 12 lb. Pails	.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price	.....	\$ .33 per case
2 in a case, price	.....	.60 per case
2 in a case in lots of 250 cases, price	.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price	.....	58.50 per 100 cases
50 in a crate, price	.....	\$10.50 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.		

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @	.....	.60c per case
10 in a wooden re-shipping case @	.....	.95c per case
50 in one large crate	.....	\$3.63 per crate
½ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	\$5.50
¼ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to National Members, cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

Address

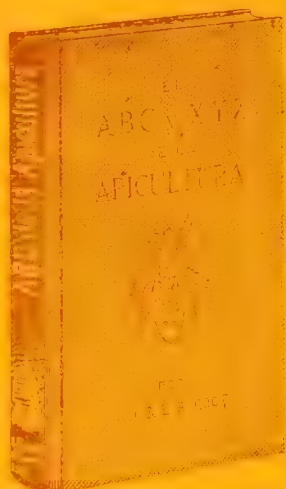
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



The Authoritative Manual on
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The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



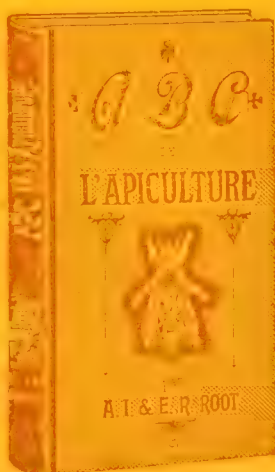
The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revision to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



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MEDINA, OHIO, U.S.A.



The Beekeepers' Review

Published Monthly

JUNE
1915

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NORTHSTAR,
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The bees like it for it's made to just suit them and is just like the Natural Comb they make themselves.

Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

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Sections are made of the best young basswood timber, and perfect.

Hives and Shipping cases are dandies.

Ask for catalogue of Supplies free.

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Perfect sections from young, white basswood, White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

Guarantee:--All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

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BEST SECTIONS.

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BEST PRICES you will get for your honey when put up in our sections and shipping cases.

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BOYD, WIS.

ISLAND BRED QUEENS

Did you ever lie awake nights thinking what a fine thing it would be to have your yard of bees isolated so far from neighbors, or wild bees that no mixing would occur? You could then breed queens from your very best stock and KNOW they would be mated with the very stock you wanted. Don't you see this would make it possible to select your breeding stock to suit yourself, breeding the queen from superior stock, the drones from others. The fact of the case, is, you would have this breeding proposition "under your thumb." The REVIEW has made arrangements with a firm who rear queens under identically the above condition, isolated on an island where there are no bees to interfere, and we will offer our readers queens from this stock during the coming season. This three-banded Italian stock is distinctly a honey gathering strain, and is direct from colonies that gave a surplus of 300 lbs. per colony, during a twenty-four day flow. This strain of pure Italians have been carefully bred up under these favorable circumstances for years, and without a doubt are much superior to any imported stock one can buy. Now it costs money to move a yard of bees to an island for the sole purpose of controlling the mating of queens, and it cannot be expected that these purely mated high grade queens can be sold at the price of ordinary stock. Although the firm who are breeding these queens for us have a thousand nuclei, or mating colonies, we look for a "scramble" after these superior queens this Spring and it behooves the party who expects to secure some of these queens to order early. Order NOW and have the queens mailed later, when you want them. We will begin mailing queens to our Southern trade the first of March, and the Northern trade as early thereafter as the weather will permit. If you want to save the trouble and risk of introducing your queens, they can be ordered in nuclei or with bees by the pound as you choose. Queens go by mail, post paid, and bees by express, not prepaid.

We quote prices as follows, shipped direct from our breeder in Florida:

Island Bred Italian Queens, shipments begin March 1st:

	1	6	12
Untested....	\$1.50	\$ 7.50	\$12.00
Tested.....	2.00	10.50	18.00
Sel Tested..	3.00	15.00	24.00
Tested Breeding Queens	\$5.00 and		
	\$10.00 each		

Prices on Bees by the pound f. o. b. shipping point. Shipment begins May 10th:

	1	6	12
1/2 lb.....	\$1.50	\$ 7.50	\$12.00
1 lb.....	2.00	10.50	18.00
2 lbs.....	3.00	15.00	27.50

These prices are without Queens.

Prices on Nucleus and Full Colonies without Queens: Shipping now.

1 Frame Nucleus \$2.00; 2 Frame Nucleus \$3.00; 3 Frame Nucleus \$4.00
5 Frame Nucleus \$5.00; 8 Frame Colony \$7.50; 10 Frame Colony \$9.00.

Knowing this stock so thoroughly and the breeder being of National reputation, we do not hesitate to recommend this stock to be as good as money can buy, either imported or domestic. Remember we will book orders in rotation. First come, first served. By ordering now you will be quite sure of getting your queens when you want them. It is quite likely to be different, later. Order with remittance.

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

You Take No Chances When Using Lewis Beeware

Lewis Hives and Sections and all other goods are made from the best materials and are scientifically manufactured.

This Is the one conclusion on which all Beekeepers can agree

OUR GUARANTEE

We absolutely guarantee our goods to be perfectly manufactured of the best material for the purpose. On examination, if our goods are not as represented, we do not ask you to keep them. Return same at our expense and we will refund your money, including any transportation charges you have paid. If you purchase our goods from one of our distributors, this same guarantee holds good, as we stand back of them.

G. B. Lewis Company, Watertown, Wisconsin,
U. S. A.

Distributers Of Lewis Beeware

**THE FOLLOWING PURCHASE FROM US IN CAR LOTS FOR
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COLORADO	Colorado Honey Producers' Association	Denver
COLORADO	Grand Junction Fruit Growers' Association	Grand Junction
COLORADO	Delta County Fruit Growers' Association	Delta
COLORADO	Producers' Association	De Beque
COLORADO	A. S. Parson	Rocky Ford
COLORADO	Coffin & Foster	Rifle
COLORADO	J. Roscoe Miller	Montrose
GEORGIA	J. J. Wilder	Cordele
IDAHO	City Grain & Poultry Co.	Nampa
ILLINOIS	Dadant & Sons	Hamilton
IOWA	Louis Hanssen's Sons	Davenport
IOWA	Adam A. Clarke	Le Mars
IOWA	H. J. Pfiffner	Emmetsburg
MICHIGAN	A. G. Woodman Co.	Grand Rapids
NEW MEXICO	C. F. Reynolds	Artesia
NEW MEXICO	H. H. Brown	La Plata
NEVADA	H. Trickey	Reno
OHIO	Fred W. Muth Co.	Cincinnati
OREGON	Chas. H. Lilly Co.	Portland
TENNESSEE	Otto Schwill & Co.	Memphis
TEXAS	Southwestern Bee Company	San Antonio
UTAH	Foulger & Sons	Ogden
WASHINGTON	Chas. H. Lilly Co.	Seattle
PORTO RICO	Fritze, Lundt & Son. S.	Ponce
ENGLAND	E. H. Taylor	Welwyn

The Bee Keepers' Review.



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W. Z. Hutchinson

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In Moving Bees with Team and Wagon, Two Men Go with Each Rig

One does the driving of the horses, the other keeps the smoker in good trim and is on hand in case of accident. It sometimes happens, even if the bees are well packed up at the start, that leaks will occur in some of the hives after they are hauled some distance. If only a bee or two escapes, and the one with the smoker is at hand, the leak may be stopped without removing the team from the wagon. If it is hot weather and a considerable number of bees are getting out, it is better to remove the team from the wagon at once, while the repairing is taking place. Bees that escape from the hives during the period of moving, are not usually in a stinging mood, still, one should not take too many chances, but keep the bees in the hives if possible. The weather will have something to do about this, and we always take more precautions in hot, than in cool weather while moving.

Nocturnal Bees

In a previous issue of the Review we made allusion to a species of bee, honey bee, that was reported to us as working on flowers during the night time, in the Philippine Islands. We wrote at once to Mr. Alvin J. Cox, Department of Science, Manila, and received lately the following reply, which, we think, will speak for itself.

“Mr. Edw. G. Baldwin,
Associate Editor, Beekeepers' Review,
Deland, Fla.

Sir:

In answer to your letter of Aug. 31, asking if there is any species of bee in the Philippines, which works at night, I have the honor to state, that there are three species of honey bees here, viz: *Apis Indica*, *Apis Dorsate* and *Apis Zonata*. The last two have been seen gathering nectar during moonlight nights.

Very respectfully,

ALVIN J. COX,

Director Bureau of Science, Manila.

It will therefore appear, that the phenomenon is more interesting from a sporadic and abnormal point of view than practically valuable for commercial purposes.

E. G. B.

“A constant temperature of 110° F. continued for from 7 to 10 days, will liquify candied comb honey without injury to the comb.” Western Honey Bee (If that is so, (and it looks reasonable) is not the candied comb honey proposition solved? As this is the season of “candied” comb honey will the subscriber who has candied comb honey try out the “scheme” and report the results for the pages of the Review?”—Ed.)

This year, for the first time, we had a runaway swarm, from some unknown source, take up its abode in an empty hive. A pile of half-depth supers was standing near the wood shed, back of the hive shop; a few days ago I noted that a few bees were flying about and thought “must be the propolis on the old hives, for the bees surely would not care to leave orange bloom, and mess about old combs that have lost all odor of honey”. (For we had empty combs stored here.) Imagine our surprise two days later, when we came home from the University, at noon, to hear Mrs. Baldwin say “there is a swarm of bees in those empty hives.” And sure enough, it was true. A medium-sized swarm had come, while she

was near, and entered the pile, under a warped cover (it was not a metal cover, we hasten to assure our readers!) and when we looked they were as much at home as if they had been there always. While we have heard of many such cases, still this is the first time it has happened to us. There seems no doubt in this instance, that those earlier flying bees were the scouts that later led the swarm to the selected spot. We can not help wondering whether that particular swarm clustered before going away, whether the scouts made a last final trip, while the rest clustered, to see if all was well, or whether they took their word for it, and sailed away for the new domicile! Truly, a wonderfully interesting little creature is the honey-bee!—E. G. B.

Annual Hive Record During Orange Bloom

We append herewith our annual hive record, during orange bloom. The record this year, is remarkable, in many ways. One must have gone through that period, right along with the bees, to appreciate it fully. Most striking of all, is the great fluctuation in daily gains. Notice the slow gain at the start, for nearly a week the hive was placed on the scales, hardly more than a pound or two was added to weight. During this time, the weather was cool, very cool, for the time of year; many days the bees could not fly till ten o'clock, to any advantage, and in any numbers; and moreover they would have to stop work about three o'clock. Of course in such weather with such short hours, with immense quantities of brood coming on, the daily gain in weight is slow. About April 1st there was even a slight frost, and the hive lost for three days. This was very discouraging; for seldom if ever before have I known of much honey being stored after the 10th of April, and it surely looked as if our Orange blossom honey were to be conspicuous by its absence this year. But with the advent of April weather became almost perfect. It was warm enough, but not too hot, dry enough but not too dry. And we have found that infallibly too much heat is as disastrous for yields from orange blossoms, as too much cool weather. It dries up the nectar, and the bees stop work about ten o'clock, when heat is too great. But note the gains, then, eight, ten, eleven, seven lbs. etc. Things looked a bit more hopeful; still time seemed too short for much of a harvest. We still anticipated April 10 as the end of our harvest.

Imagine our surprise when April 11 gave us 11½ lbs., the greatest gain of any one day, only one other day equaling it, and

that other, April 17th, it was phenomenal. And even as late as April 20 a gain of 3 lbs. Never before, in fifteen years have we had so late a honey flow from orange. Last year in these columns we spoke of the lateness of the yield in California (apropos of Mr. Lefler's article) as compared with that here. This year Florida almost paralleled the time of bloom in California. March is usually our main honey flow month; April in California. This year April was **our** main gain also.

Another thing; note the almost unparalleled divergence and fluctuation in the daily gains. April 5 the gain was 8½ lbs. On April 6, it was only 1 lb. A cool snap caused this. On March 29, it was 2 lbs.; on March 30, it was 6 lbs.; on March 31, it was none! On April 12 gain was 7 lbs.; on the next day, it dropped to 3 lbs., and the next, to one-half lb! On April 16 it was only 4 lbs., right in between two gains of 9 lbs. and 11½ lbs. respectively! Did ever such fluctuating yields appear elsewhere?

One marked feature of this extreme variation showed daily. We could hardly enter the yard without being attacked with a swarm of fighting bees; and these from our usually mild leather colored Italians. We would have to wear armor proof garments to do the needed work. The bees would come 100 yards to meet us, before we reached the yard. The folks in the home could hardly attend to the necessary duties about the place, without veils, company was often chased from the place, and bedlam seemed let loose. And this right in the midst of the honey flow. We had never seen anything like it. We can account for it on no other basis than the fact, that the flow seemed about to end any day, thus keeping the bees in that state of uncertainty that always appears, when flow is drawing to a close. They were nervous and upset all the time. Now, after the flow, even with robbers prowling about, the apiary is twice as quiet and peaceful as during the height of the flow. If that is not paradoxical, I want to know it. If any one else has any other theory or any comment to make, we open the columns of this magazine to him, and invite correspondence along this line. Surely we all live to learn and we have indeed learned some things this year in our Orange Bloom of 1915.

Hive Record, 1915. Average Colony. Orange Bloom.

Put hive on scales March 22

		Wt.of	Lbs.	Lbs.
		Hive	Gain	Loss
March 22	(Cool weather)	73		
March 23	(Cool weather)	76	3	

March 24	(Cool weather)	76	No	
March 25		79 $\frac{1}{4}$	3 $\frac{1}{4}$	
March 26		81	1 $\frac{3}{4}$	
March 27		85	4	
March 28		88	3	
March 29		90	2	
March 30	(Put on hive body, weight 15 lbs.)	111	6	
March 31		111	No	
April 1	(Cold day)	117 $\frac{1}{2}$	6 $\frac{1}{2}$	
April 2	(Cold day)	115 $\frac{1}{2}$		2
April 3	(Cold day)	112 $\frac{1}{2}$		3
April 4		121 $\frac{1}{2}$	9	
April 5		130	8 $\frac{1}{2}$	
April 6	(Cold)	131	1	
April 7	(Put on new hive body, wt. 15 lbs.)	154	10	
April 8		157	3	
April 9		164	7	
April 10		172	8	
April 11		183 $\frac{1}{2}$	11 $\frac{1}{2}$	
April 12		190 $\frac{1}{2}$	7	
April 13		194 $\frac{1}{2}$	3	
April 14		195	1 $\frac{1}{2}$	
April 15		204	9	
April 16		208	4	
April 17		219 $\frac{1}{2}$	11 $\frac{1}{2}$	
April 18		226	6 $\frac{1}{2}$	
April 19		231	7	
April 20		234	3	
April 21		234	No	
April 22		231 $\frac{1}{2}$		2 $\frac{1}{2}$
April 24		230		1 $\frac{1}{2}$
April 25		229		1

Hive taken off scales

E. G. B.

Bolster Springs For Moving Bees on Wagons

At this date, May 15th, we have moved about 400 colonies of bees by wagon, this spring. We keep two teams, and use heavy farm wagons to move upon. One of the wagons is provided with a set of two ton bolster springs, the other wagon was used without springs of any sort. We have decided after this comparison exper-

ience, that we will put no more money into springs to move bees on, the loads without springs reaching their destination in rather better shape, than with springs. While there was no difference in results as far as the bees were concerned, a heavy load of fifty swarms and covers are not so easily kept in place on springs as without them, the rack being more liable to cause trouble on springs, than without. The fact is, there was positively no rack trouble without springs, while the rack upon springs has to be watched to see that it does not shift out of place. Not a single comb was broken on either load, nor was there any particular pains taken in driving, the teams taking their usual walking gait, excepting getting out to the road through some rough places, the teams were held up some.

In moving bees during the month of May, screens are tacked on top of the hives and held in place with four lath, but during the three months of summer, more ventilation and clustering room must be provided. For ordinary summer weather and normal swarms, likely a half dept. super placed on top, for a clustering place will be sufficient, but if the weather is extraordinary hot, or an abnormally large colony is to be moved, a full dept. empty super with screen on top should be placed on top the swarm, furnishing room for nearly the whole swarm, clustering room, so they can leave the hive proper, to better control the temperature, thus preventing their melting down and smothering.

What to do in June

C. STIMSON, Holly, Colo.

(For the Arkansas Valley)

The honey flow from alfalfa usually commences early in June. The old honey should be used up by this time if possible.

The beginning of the flow is the time to examine the brood to see if it is healthy. The disposition to rob stops as soon as there is a full honey flow. Combs with drone comb should be put in the extracting supers with a queen excluder over the brood nest. As the hives fill up give plenty of room. Always put full sheets of foundation in place of combs taken from the lower story. An old swarm is apt to build drone comb if given an empty frame in the brood nest. If in need of new combs put three frames containing full sheets of foundation in the second story when giving additional room or the first extracting super. If full sheets are put in the brood nest a space is apt to be left along the bottom bar to be filled in later with drone comb.

If frames containing full sheets of foundation are put in early in the second story, they are usually built down to the bottom bar. If put in later in the season if the weather turns hot the combs are likely to buckle or lop over near the bottom. I leave these new combs in the hive without extracting them the first season so as to be sure of plenty of stores for winter. The next year they are tougher and easier to extract from than when filled the first time.

If plenty of room is given promptly where needed there is not much danger of swarming. They are apt to swarm when the queen is superseded even if there is plenty of room. The strongest swarms usually fill their storage room by the last of the month and are ready to extract in order to make room for more.

Management of Three Thousand Colonies Bees in Fifty Yards

J. J. WILDER, Cordele, Georgia

When a beekeeper has fully made up his mind to establish as soon as possible a large bee business, he should pursue a different course from that of one who just desires to establish a business just large enough to look after himself and derive his livelihood therefrom. Such a one should never think of putting in even a small plant for the manufacturing of the small amount of supplies he would need. He had better buy them along as he needed them, but if he so desired and he could obtain suitable lumber he might make the bottoms and covers for his hives as it does not require much mechanical skill to do so and but very few tools; this would be enough for him to do towards hive-making. But on the other hand, if a large business is in view he should install an outfit at the most convenient point which should be as near central as possible in the proposed territory, large enough to get out the needed supplies for the proposed business, and suitable lumber obtained for the purpose for each season's needs in advance, so as to have it properly worked up and set up in ample time. As all our great lumber plants are equipped with a machine they call a surfacer, which sizes the boards to any desired thickness, dressing well both sides, it is best to let them do this, and save you putting in heavy machinery for the purpose, and for this they charge but \$1.50 or \$2.00 per 1,000 feet, which also greatly reduces the weight of the rough boards of no uniform thickness and thereby saves freight. After this has been done it only requires a very light outfit in the way of an engine and machinery, which should be a small gasoline

engine and a combination wood working machine such as are commonly advertised.

At the close of each season or when all apiary work is done the best qualified apiarist for the purpose should be put in charge of this work—that of cutting out hives and hive parts and be given a good active cheap helper, and in ample time for the approaching season the needed supplies are cut out and in readiness, and the apiarist is kept at work at a good profit even during the dull season.

Then too, where a beekeeper only has a small business he can do the work just as it should be done himself or being right along with his help he can see that it is done properly. For in beekeeping, if every little thing that might be done, if done at the total expense of hired help, would more than eat up the profits. So only the more necessary things must be done and the more unnecessary things left off. This means much, and the owner must always keep his eye on it. He must focus the whole thing all the time and direct the labor where it will count the most.

It is not necessary to enumerate the many minor things that are not absolutely necessary to greatly advance the business in all directions for they pop up before every mind that is active in this particular.

Also the expenditure in honey houses and their equipment must be restricted, especially in sections where the bee pasture is limited and only 60 or 80 colonies can be kept in a single apiary. Such apiaries can best be worked from the more central ones where economical honey houses are erected and where all packing and setting up of supplies is done. As apiaries are visited, supplies are carried out and same can be done along as honey is hauled in, and if the bees are not ready for the supers when they are hauled out they can be well stacked to one side and covered up with extra hive covers, which would save any kind of structure for the purpose. A number of apiaries can thus be worked, located in a circuit for 10 or 15 miles around.

One other thing: A large bee business must have one or more regular well equipped queen-rearing yards from which to supply the different branches of it with the needed queens. With a number of queen cell protectors at each yard at times, many can be saved and given to colonies that might need them and a great amount of requeening done in this way along as apiary work is being done, and not greatly interfere with the general work. But a great many queens are needed at different times during the season, and there must be some particular place to raise them, which we

always found best to do at the main home yard, and at the same place much increase is made and sent to different apiaries where it is needed. For this purpose the home yard is indispensable and the main yard in the business. Besides here is where we keep our very best stock and from this we do all our breeding and in a great measure thus keep the stock up everywhere, sending here and there all the time queens from this choice stock. A good apiarist has the charge of this part of the business, that of making increase and sending it to where needed, rearing queens during the season and sending them out to different ones in charge, and when convenient goes and looks after the introduction of them. This is a great work and no great bee business can go without it, for requeening must be done and the best stock looked up and kept to breed from.

Advertising Honey

EARLE C. FOWLER, Clintonville, Conn.

I read in the March issue of the Review Dr. A. F. Bonney's article on "Advertising Honey" and am in favor of his plans. I believe as he does, that the National Association cannot or should not lay aside a sum of money for National Advertising.

A beekeeper cannot understand how he, as an individual, will be benefited by sending a dollar or so to the National for their purpose in advertising honey.

He must advertise honey in his own locality and under his own name. He must, in some way, get the people of his locality to "Eat Honey." If this can be accomplished he can get the stores to handle his line of goods.

I find, by some experience, that many of the stores and dealers do not handle honey because there is no market for it. Therefore, I approve of the Display Cards as noted in April Review.

Also I would suggest that blotters similar to sample I enclose would be an excellent way to locally advertise honey if used in the right way. A few of these blotters given to the store keepers and if they could be given to public schools for free distribution among the scholars, I am quite sure they would increase the sale of honey. They also would increase the sale for the one advertising the honey and distributing the blotters—not for every brand of honey but this particular honey.

One cannot understand the working power of these blotters until he has tried it for himself.

Eat Honey

GEORGE A. BOYUM.

Here is a message, to one and all,
 To young and old, the big and small,
 "EAT HONEY."
To boys and girls, the men and ladies,
 To fathers, mothers and the babies,
 "EAT HONEY."
To people poor or rich and wealthy,
 The weak or strong, the sick or healthy,
 "EAT HONEY."
To the short and chubby, slim and tall,
 In winter and summer, the spring and fall,
 "EAT HONEY."
When your appetite is getting slack,
 A little honey will make you smack,
 "EAT HONEY."
Syrup on pancakes will sometimes do,
 But, honey is better, more healthful too, ,
 "EAT HONEY."
And when you are tired of jelly with bread,
 Then eat some delicious honey instead,
 "EAT HONEY."
When you have a cold or you have a cough,
 When your throat is sore and feels kind of rough,
 "EAT HONEY."
New biscuits with honey are very fine,
 Your guests will like some everytime,
 "EAT HONEY."
And when the children want something sweet,
 Give them honey, 'tis healthful to eat,
 "EAT HONEY."
If honey you never have used before,
 Go get some, today, at the grocery store—and—
 "EAT HONEY."
Good honey is cheap at any price,
 And verily this is good advice,
 "EAT HONEY."

How Best to Control Swarming and Increase when Working for Comb Honey

WESLEY FOSTER, Boulder, Colorado

For ten years never more than twenty-five per cent of our bees have ever been prepared to swarm in any one season and we are engaged in comb honey production exclusively. Less than half of these hives that begin to think of swarming ever get beyond building the cells and getting eggs started in them. By cutting the cells out we discourage all but a very few. At the time of cutting the cells more ventilation is given at the bottom and super room with baits in the supers and perhaps a little upward ventilation if the weather is real hot. A plan we have used quite a little is to put bait sections with some honey in them on the hives two or three weeks before the honey flow so that the bees will take out the honey and get used to the sugar. My notion is that they enter it more readily if they have become accustomed to it as a part of their hive. In keeping the strength of all our hives as uniform as possible we take considerable brood and hatching bees away from the hives that would be most likely to swarm giving the brood from these strong colonies to the weaker ones.

We clip our queens' wings but it is becoming more unnecessary every year except as a way to tell the age. In looking for queen cells or cups with eggs in them we lift the front of the hive off the bottom board and look up between the combs. One rarely will miss a cell if there are any to be found.

There is one thing about our location which makes it favorable to non-swarving and that is we do not have a fast honey flow. The best we can hope for any season is about five pounds per day, while three and four would about hit the general average.

I take it that the one who asked the question I have taken for a topic wished to know how to keep the swarming and increase within his control. We have controlled it in our apiaries so that we get no more increase than enough to make up what we lose in wintering and queenlessness.

By watching the conditions that bring about swarming one can avoid the major portion of it. When a hive gets full of bees, honey and brood these must be reduced or at least more room given or swarming will result. We do not allow the brood chamber to become crowded till work has been started in the supers—it must be admitted this is impossible with some hives. By giving brood and

hatching bees to the weaker hives the strong colonies are kept within bounds. Rather than let the bees get the swarming fever I would put on an extra body and alternate every comb of brood and eggs with a dry empty drawn comb or a full sheet of foundation. A two story hive is not too large for some queens anyway and a colony will winter well in a two story eight frame hive.

All our hives are set right out in the sun and there are no porticoes on them either. We use an inside cover and an outer cover of tin. A comparatively slow flow, cool nights, no sultry days, a dry atmosphere, always abundant room in the brood chamber for eggs, bees and honey and cutting cells once (sometimes twice) are the causes which keep down our increase to five or ten per cent.

Swarming at the Outyard, while Working for Extracted Honey

E. D. TOWNSEND, Northstar, Michigan

Some seasons we have more swarming while working for extracted honey, than we like. The fact is, we do not like to have any swarming during the clover flow, for there may not be any one there to hive them. Then many of our yards are in tall timber, where practically all the swarms alight so high, they cannot be hived. Last year was one of those great swarming seasons during the clover flow. A day or so of honey weather, then two or three days of cold rainy weather, just enough honey coming to stimulate a large amount of brood rearing, which naturally caused many colonies to prepare to swarm. We were not long in discovering that if something was not done under the circumstances, many of our very best colonies would swarm and go to the woods, and in that case our honey crop would be short.

We Took the Swarming Problem Into Our Own Hands

Two methods of swarm control were resorted to. One the shook swarm plan, the other a modified Alexander plan. By visiting each yard once a week, and swarming artificially all colonies where queen cells were being started, prevented nearly all from absconding.

The Internal Condition of the Hive Read From Entrance Indications

Not all colonies were handled in looking over a yard for swarming indications, for the entrance indications would tell us very nearly what was going on inside the hives: to illustrate; while the boys were putting out the team after reaching a yard during the swarm-

ing period, the writer has walked over the yard without opening a single hive, and by the time the teams were taken care of and the boys came to the yard and asked "what was doing." I would tell them that I had marked 10, 12 or 14, as the case might be, to be treated, and rarely ever was I mistaken, although we would look over several others that were in the doubtful list.

To locate these colonies having the swarming fever, that are starting queen cell, the upper stories are set off on an empty body for convenience, the hive tipped back from the bottom board and the bees driven off the lower part of their combs with smoke. If cells are well started, this will be all that is necessary to discover their condition. In case you do not find cells by the smoke plan, spread the bottom of the frames apart with the hands and look in between the combs further up, also in between the lower edge of the combs and the bottom-bar of the frame. With this examination, if you do not find cells you can trust them for another week.

The Shook Swarm Plan

But few colonies are now handled on the shook swarm plan, the majority being "swarmed" on a modified Alexander plan, that we will describe in the following paragraph. There is too much absconding of swarms to work the shook swarm plan to a profit, especially when we have a much better plan, in the modified Alexander. The shook swarm plan only being used in treating colonies for American foulbrood.

Our Modified Alexander Plan of Swarm Control

In making up winter loss, or where drawn combs are available, remove a central comb from the dead swarm hive, now find the queen in the hive to be "swarmed" and place her on a comb containing but little brood. The comb containing the queen is now placed in the prepared hive, said hive now being placed upon the old stand. A queen excluder is now placed upon top, then a set of extracting combs, and upon top of all, the old hive containing the balance of the brood and bees. Of course they have cells started and in this position will finish up as nice a bunch of queen cells as one wants to see.

Our Modified Feature of the Alexander Plan

The reader will recognize the above plan as the regular Alexander plan, and there is none better where drawn combs are to be used, but if this plan is followed, and **foundation** used instead of drawn combs, the bees will usually desert the queen below, doing their work above where there are empty combs to store in, to the neglect of the broodnest, consequently there may be no swarm left at

the close of the season, even the queen herself missing in some cases.

Our modified plan where foundation is used, it to remove the central combs containing most of the brood and ALL the queen cells to the third story, as before, leaving all the outside combs containing honey and some little brood at the outside, (usually three or four combs are left in a ten frame hive) the central portion of the hive is now filled in with foundation, and with this method we have never had a broodnest abandoned but usually find the foundation all drawn out, no matter how much empty comb space is given above.

With this plan, if we do not find the queen the first time looking them over, the bees and queen are shaken off the six cards of brood raised above, this being the quicker way in many cases.

An Amateur Optimist's Anticipation

WILLIAM VOLLMER, Akron, N. Y.

Much has been said and read about foul brood and its terrible onslaught on the beekeeper, the careless beekeeper in general. While of course when once in a locality it is a contagious disease, and it seems to be breaking out in new localities every now and then.

As a general thing the inspector, if there is one, is a very busy man indeed, generally too much territory to cover, that is to inspect and enforce the law to limit.

How can we ever hope even to abate this disease under such conditions? There will always be the careless farmer beekeeper with a few colonies, who usually looks after them about two or three times a year, once in the spring to see if they are alive and put on some kind of ramshackle supers; then again when they swarm to hive them in an old hive that has not been properly cleaned out, and again in the fall after all honey is gathered to take same, if they have stored any, which is generally very little. And the last of all we will divide into three parts. 1st, he has the very best equipment to harbor and transmit disease and rear a generous supply of moths, as his bees are generally black or brown. 2nd, his bees always rear a plentiful supply of drones (black of course) which is a nice detriment to his neighbor beekeeper to mate his selected Italian queens to to have them breed pure. 3rd, when he does have some honey he will sell same in some old soiled sections or strained as the case may be; at least he always sells at a

low figure or takes it to his grocer who gives what he likes and trades it out. In turn the grocer sells it low which is a nuisance to the better class of grocers who have the real article at a price really higher but worth it.

But let us return to the small beekeeper. We want him to exist. Certainly. We must help him, but will he listen? He generally knows it all, or disregards up-to-date methods, as he calls them.

A plan I would propose would be something like this. Let the state license and register all beekeepers, large and small, at say \$2 per year. (They pay dog tax and think nothing about it, to protect the sheep owners) and issue numbers similar but smaller than automobile numbers and have an inspector for every county to see that each apiary was inspected and enforce the law to the limit; also the spraying law. I think it would put a different feeling in the beekeepers, possibly a feeling of harmony and cooperation, and would also have a tendency toward evening the variation in the selling price of honey and it would induce him to keep bees better or not at all, either of which would help.

Just another word in regard to Foul Brood Laws. If a law something after the nature of the above was introduced into any state legislature it would not meet that opposition it does when it carries an appropriation, as this would almost be self sustaining, and in my opinion in a short time limit areas affected by this dreaded disease FOUL BROOD. Am I right?

Field Notes from Iowa

REV. J. W. STINE, Stockport

April has been the best month for bees to build up I have known it to be for several years. There was almost a continuous honey flow through this month, and the warm weather enabled the bees to gather nearly every day. Some of the brood chambers are full of honey and pollen and will need to have some honey extracted this month. The berries and wild cherry are making a "good fill-in" until white clover which will commence to bloom the latter part of the month. If we can have more rain through this month the white clover, which is showing up quite nicely in this locality, we shall have a good flow of honey from this source.

The tri-state summer meeting at Hamilton will probably be held in August. It is hoped there may be a large delegation from Illinois, Missouri and Iowa at this meeting.

(Editor's Note—These Field Notes should have appeared in April number, but were overlooked.)

The winter in Iowa has seemingly been a good one for the bees. Having examined hives both in the cellar and those wintered out of doors we find them quite strong in bees and the death loss has been small in southeastern Iowa as far as I have been able to hear from the beekeepers. Much care will need to be exercised from now on that the bees have plenty of good stores near the cluster of bees.

The great amount of snow we have had this winter should be a great encouragement to the beekeepers for it means a good prospect of a crop of white clover honey where the white clover is in evidence. The Alsace variety is being sown in certain parts of Van Buren Co. and I suppose in other parts of the state as well and good reports of this clover as a honey producer have been received by the writer.

I wish to call attention to the advertisement of Mr. J. I. Danielson of his Golden Italian queens which he will have this season for sale and say that I am personally acquainted with Mr. Danielson and find him a Christian gentleman and a man you can depend on. He is a young man and very unassuming, and for bees that have the color true to guarantee also prolific and good honey gatherers and good foul-brood registers, his bees are the best I have ever seen. Two years ago this August I made an examination of the bees in this apiary and first met Mr. Danielson and I was with him among his bees in the cellar and saw them again this spring, also heard his account and secured some honey each year he was doing it.

The weather in Iowa through the month of March was very cold and there were not many days suitable for the bees to fly. This has held brood rearing somewhat in check. Since Easter Sunday the bees seem to be trying to make up for lost time and are gathering pollen from the elm and soft maple and carrying water as fast as I ever saw them work.

I took six strong Italian swarms three and one-half miles northeast of town as the nuclei of an out-apiary to a creek bottom, taking them from the cellar. These had been put out of the cellar for a cleansing flight in February and were in fine shape, and the way they did fly was like in the "good old summer." I am thinking of starting two more out-apiaries—one about three miles north and the other three and one-half miles northwest of town near a large creek bottom. There are several linden trees on these bottoms and the locations are the best I have found in Iowa.

I find my Italian colonies far surpass my three Carniolian and one Caucasion swarn this spring, having wintered better in every way, and are stronger in bees. I have found the Goldens better than the other strains of Italians.

Michigan's Fiftieth Annual Meeting

The oldest beekeepers' association in the United States will celebrate its 50th annual meeting at Grand Rapids, Michigan, on December 15 and 16, next.

The original records of the association, still in good shape, show that Professor A. J. Cook, now State Commissioner of Horticulture for California, was the first secretary of the association. At that time Prof. Cook was connected with the Michigan Agricultural College, East Lansing, Mich., teaching Entomology and Apiculture. For over twenty years since Prof. Cook left, beekeeping has not been taught at the college, but in 1913 I had the pleasure of introducing the subject once more. It is a coincidence that the present secretary of the association, after so long a lapse, is connected with the Agricultural College, trying to disseminate the subject of beekeeping, as was the original secretary.

Looking over the records we find the names of many prominent beekeepers who have since gone to their reward. Among others these names are found: Ezra Rood, the first president; Bingham; Gallup; Otis; Taylor; Hilton; Hutchinson, etc.

In one of the early meetings I find that a paper was read by the secretary on "The Apiary and Its Arrangement" by A. I. Root ("novice"). Wonder whether Mr. Root can remember this paper? Besides Mr. Root, many other names are prominent, one other, who is still alive—Mr. M. M. Baldrige, who read a paper on "The Extractor".

We hope to have many old memories revived at Grand Rapids, so that we present-day bee men may get a glimpse of what the pioneer beekeepers had to contend with.

The association is trying to arrange a meeting that will be a little out of the ordinary, and with the cooperation of the Michigan beekeepers, this should be possible.

We aim to make a special effort to get a good exhibit of honey, and any beekeeper who would like to make an exhibit would do well to write me. By making plans at this time the choice of the crop can be saved and a nice exhibit prepared.

We shall be pleased to receive the dues of any members who have not paid, and from others who would like to join the association. In a future issue we shall have more to say, but do not forget that the dates are Wednesday and Thursday, December 15th and 16th, 1915, and the place Grand Rapids, Michigan.

F. ERIC MILLEN, Secretary-Treasurer.

The "Boosters' Club"

GEORGE W. WILLIAMS, Redkey, Indiana

I see by the roster that the membership was increased several hundred per cent this month. We have money in the treasury. As this is a "Booster" club, we will take this occasion to point with pride to the auspicious beginning. (Note—All big things must have a beginning.) We think that we will be able to point with some more pride next month. Do you know what a "Booster" is? A "Booster" is a man who boosts. Are you "It?"

The regular salaried poet went on a vacation this month but the following is presented for discussion. (My wife says there is more truth than poetry in it, but she is prejudiced—she is afraid of bees, anyhow—one "Boosted" her out of the apiary yesterday.)

"Boost," beekeepers, all together,
 "Boost" in fair or stormy weather—
 If we prosper, we must lend
 All our efforts to the end
 Of "boosting" sales, and "boosting" price,
 Keeping everybody feeling nice,
 Then "BOOST."

This concludes the opening exercises of the club, and we will all prepare to take a nap while we listen to the discourse.

Our Road to Success---Do It Ourselves

"And the mother lark fluttered home the next morning, and called her children around her and told them that at last they must get ready to move their home from the field of grain, as she had heard the farmer tell his sons that they must cut the grain **themselves**. They had asked their friends, neighbors and kin-folks to help, and they had promised but they had their own grain to cut and their own axes to grind, and so had failed to come, but now the grain was ripe and wasting, the farmer and his sons were coming in the morning to DO IT THEMSELVES, AND IT WOULD BE DONE!"

—(Old Nursery Tales.)

We beekeepers have been asking our friends, neighbors and kin-folks to help up advertise our golden harvest of honey, but they have had their own axes to grind and business to attend to, and it has not been done. This is a "booster" club, and we have no time to "knock" them for not doing it for us. If we knew the truth,

they probably have troubles enough of their own without taking on ours.

We are going to take off our coats **and do it ourselves.** We may not do it as artistically as a \$75,000 publicity agent but beekeepers are persistent fellows, and expect to get "stung" occasionally anyway—we are used to it. We may not know much else, but we do know the good qualities of honey, and we are going to make the other fellows recognize them. We want a market that will absorb our present production plus the future increase, and do it at living prices.

We can get this market if we will, and we must do it if we keep in the business and make any money.

We must do it too, by advertising our goods. It has been demonstrated in hundreds of instances that any given market can be cultivated sufficiently to absorb a large amount of honey in addition to the normal. In fact there is apparently no limit to the amount that can be sold if properly pushed. New uses must be found for the cheaper grades, and the table grades kept up to the standard.

Efforts have been made at different times to raise a big fund for general advertising. These have failed because the beekeeper's good judgment saw that it would be money wasted. But they realize that we must advertise, and do it extensively. We must spend a great deal of money or its equivalent in special effort in doing it, but not in the way proposed. Each beekeeper must spend his money himself, for himself, and develop his own home market to its full capacity. Sell all his honey at home and then buy and sell all he can of those who are not so fortunate as to have a home market.

This is the key to the whole situation. There are hundreds of beekeepers who are doing this and making money at it. A well established honey route is better than an old age pension, and gives a sound self-respect that the pension does not give.

Maybe you have developed some selling "kink" that will help the other fellow and maybe he knows one that will help you. Get together and get busy. If you have made a success of selling, tell us how you do it. I am going to give what energy and time I can spare in the endeavor to get the beekeepers and bee journals to give publicity, and especially local publicity the attention it merits. Last month I proposed that we raise a purse of \$50.00 to be offered for the best articles relating to selling honey and opening new markets for it. I have not yet received any contributions to this fund, but doubtless will later. If you feel that this is a good thing, we will

The National Beekeepers' Association Inc. And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
..... Amherst, Mass.
FRANK C. PELLETT, Vice President
..... Atlantic, Iowa
WESLEY FOSTER, Secretary-Treasurer
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E. J. BAXTER..... Nauvoo, Illinois

Affiliated Associations and Their Secretaries

<p>ARIZONIA HONEY EXCHANGE..... G. M. Frizzell, Temple, Ariz. ADIRONDACK—H. E. Gray..... Fort Edward, N. Y. COLORADO—Wesley Foster..... Boulder, Colo. CHICAGO NORTHWESTERN—E. H. Bruner, 3836 N. 44th Ave., Chicago, Ill. HAMPSHIRE — HAMPDEN — FRANKLIN Dr. Burton N. Gates..... Amherst, Mass. TWIN FALLS—C. H. Stinson..... Twin Falls, Ida. IDAHO HONEY PRODUCERS' ASS'N — F. C. Bowman..... Idaho Falls. IDAHO—OREGON HONEY PRODUCERS' ASS'N INC.—P. S. Farreil..... New Plymouth, Idaho. ILLINOIS—Jas. A. Stone..... Rt. 4, Springfield, Ill. INDIANA—Geo. W. Williams..... Redkey, Ind. IOWA—S. W. Snyder..... Center Point, Ia. KANSAS—O. A. Keen..... Topeka, Kansas. MASS. SOCIETY OF BEEKEEPERS (East- ern)—Benjamin P. Sands, 1051 Old S. Bldg., Boston. MONTANA—Percy F. Kolb, 134 Broadwater Ave., Billings. MICHIGAN—F. E. Millen..... East Lansing MINNESOTA—F. W. Ray, Minneapolis, Minn.</p>	<p>MISSOURI APICULTURAL SOCIETY INC—Austin D. Wolfe..... Parksville. NEW JERSEY—E. G. Carr..... New Egypt, N. J. N. CALIFORNIA—Alwin P. Helm..... 16, Fair Oaks, Calif. N. MICHIGAN—Ira D. Bartlett..... East Jordan, Mich. OHIO—F. R. King..... Creola, Ohio. OREGON—Floyd E. Smith..... Dallads, Ore. THE NEW MEXICO BRANCH..... Henry C. Barron..... Hagerman, N. M. PENNSYLVANIA—H. C. Klinger..... Liverpool, Pa. PUERTO RICO—J. W. VanLeenhoff..... Ponce, Puerto Rico, 11 Marina, Ct. SOUTH IDAHO AND EAST OREGON R. D. Bradshaw..... Fayette, Ida. TENNESSEE—J. M. Buchanan..... Franklin, Tenn. TEXAS—H. E. Graham..... Gause, Texas VERMONT—P. E. Crane..... Middlebury, Vt. VINTON BEEKEEPERS' ASS'N..... E. J. Winder..... Vernal, Utah. WASHINGTON—S. King Clover, R. No. 1, Mabton, Wash. WISCONSIN—Gus Dittmer..... Augusta, Wis. WORCESTER COUNTY—J. S. Whitte- more..... Leicester, Mass.</p>
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gladly receive and credit your contribution.

The Grocery Trade

There are 173,029 retail and 4590 wholesale grocers in the U. S. Of course a great many of these are in territory not desirable to cover, but if this vast army can be reached every month with good sound reasons why it would be to their profit to handle honey and push it, they could sell all our surplus and then as much again. I am laying plans to do something along this line. It will cost money and lots of it to accomplish what should be done. Other food products are doing this with good results. We have a better product than many of these who sell more goods than we do, because they advertise.

Last month I proposed that we open a fund to interest this trade. I have at this writing received two additions to the fund, as the time has been short.

Previously acknowledged.....	\$5 00
L. K. Hostetter.....	25
J. W. Stine.....	2 00

The Teddy Bear Display Cards

I have received some inquiries in regard to these cards. I am having a small cut made to show the design and will try and have it ready for next month's Review. They are 7x11 inches in size, just right to lay on top of a double deck shipping case without folding. They are printed in two colors, full of life and with the tinge of comedy to attract and hold attention. One should be placed in every case of honey that is placed on the market this season. This is one way for you to get direct and positive benefits from your advertising money. Wherever tried out they increase the sales wonderfully.

Dear Mr. Williams—

I am enclosing draft for \$2.00, which is 6c for each colony that I expect to have this year. I will have more in the future and I trust that you may be successful in raising sufficient funds to make the "Booster Club" an organization that shall do all its name suggests for the beekeepers. I shall be glad to help it out in every way I can.

Very truly yours,

J. W. STINE.

(Mr. Stine is Director in the Iowa State Association.)

Mr. Geo. W. Williams,
Redkey, Ind.

My Dear Sir:—Please find a small contribution to the "Boosting" fund. May make it larger later. I wish you success in your undertaking. I do a large amount of local advertising myself. I use the enclosed letter which I find a great help. I enclose some of the stickers that I use.

Yours,

L. K. HOSTETTER, Lititz, Pa.

(Mr. Hostetter is a persistent advertiser, and knows a good thing when he sees it. His sticker is a dandy.)

Minutes of the National Beekeepers' Association

GEORGE NICHOLS, Montrose, Colorado, Assistant Secretary

(Continued from May Number)

The need of a score card was brought out and discussed by Dr. Phillips. Moved by Dr. Phillips and seconded by Mr. Jager that the Chair appoint a committee, with Mr. Yates as Chairman,

to study the score card for fairs. Mr. Rauchfuss spoke on the need of a score card and the benefits from honey displays. Motion carried.

Dr. Phillips spoke on the Agricultural Extension work being done by the United States Government, and of his plan of using the educational feature to educate the County Advisors.

Moved by Prof. Jager, amended by Mr. Baxter, and carried to have a good beekeeper represent the National Association at the Southern Educational Industrial Congress.

Report of the Committee on Local Arrangements was read and adopted.

The following resolution was adopted: Whereas, The spraying of orchards while clover crops in said orchards are in bloom is a menace to the industry of honey production, and has in the past destroyed or weakened thousands of colonies of bees in the commercial fruit districts of Colorado,

Resolved, That we, the National Beekeepers' Association, in convention assembled, urge the passage of Senate Bill No. 77 now pending in the Colorado General Assembly.

Moved and carried that the final disposal of "The Beekeepers' Review" be left in the hands of the Executive Committee of the National Beekeepers' Association.

Convention adjournment 10:30 p. m. Feb. 18, 1915.

PUBLIC SESSION—FEBRUARY 18, 1915, 1:30 P. M.

The paper, Blessings From the Net-Weight Law," by Allen Latham was read.

The paper, "The Pollenation of Fruit Bloom," by John H. Lovell was read by Ward Foster.

The paper, "A Glimpse at Florida Beekeeping," by Prof. Edwin G. Baldwin was read by Ward Foster.

The paper, "The Best Methods of Increase," by A. C. Allen was read by N. L. Henthorne.

The paper, "Changed Conditions," by J. E. Crane was read.

The paper, "Opportunities and the Farmer Beekeeper," by James B. Merwin was read.

The paper, "Status of Beekeeping in South Carolina," by Prof. A. F. Conrad was read.

The Beekeepers' Review—the Beemen's own paper. Do you patronize it as you should?

Report on Apiary Inspection and Demonstration in Ontario 1914

MORLEY PETTIT, Provincial Apiarist

It has not been found necessary to make much change in the management of the inspection of apiaries from the methods reported at previous conventions. In accordance with a resolution passed at the last Annual Convention, more local inspectors were appointed than ever before, but with this exception the work has been carried on much as usual.

The Inspectors' Conference was held at the Beekeeping Short Course in January, at the Ontario Agricultural College. A letter warning against danger of spreading disease by allowing bees to rob was sent to the general list of beekeepers early in the spring, and the self inspection report forms went to the disease list of beekeepers in May. These were given a hearty response by the recipients.

Twenty-one apiary inspectors were employed. Nine of these were strictly local inspectors that is, they are practical beekeepers appointed to inspect bees in their own and adjoining counties. Eight have taken some training at the Ontario Agricultural College and have returned to their homes to keep bees. They also acted as local inspectors. The remaining four men were sent out directly from the Ontario Agricultural College, after having received a special course of training in apiary inspection and in conducting apiary demonstrations.

One thousand three hundred and sixteen visits were made to apiaries by inspectors during the season of 1914, and while in the European Foul Brood district 50 per cent of the apiaries visited were found diseased, only 31 per cent of the apiaries visited in the American Foul Brood district were found in this condition. In other words, whereas the inspectors only went to apiaries where disease had been reported or was strongly suspected, seven out of ten such apiaries in the A. F. B. district were found to be free of disease. This shows that the educational campaign which we have been conducting for several years is bearing good fruit.

While it is exceedingly regrettable it is not surprising that European Foul Brood is still spreading rapidly. Some new counties have been taken into the diseased area this year. It is only a matter of time until the whole province is covered. Nothing but careful requeening with vigorous stock and advanced methods of management will save any apiary in Ontario from ultimate destruc-

tion. By our publications, demonstrations and inspectors, practically every beekeeper of Ontario has been repeatedly warned, yet comparatively few have taken heed or will heed until the enemy is upon them, and they have suffered heavy loss. In the infected areas the business has been reduced to the very few who have taken advice and are building up their apiaries again to a paying basis. These few are proving the truth of what has been said and their evidence is of great value in the educational campaign still being waged in advance of the disease.

No doubt one reason for the indifference to warnings in the E. F. B. counties is the fact that previously no bee disease had been known there. It is only this year that the American and European Foul Brood territory begins to overlap, in Victoria County. From now on we can expect an increasing number of cases of the two diseases in one and the same colony. This will no doubt make it necessary to treat all such colonies by requeening for E. F. B., and by shaking for the American variety of disease.

Fifty-five apiary demonstrations were held in all parts of Ontario with a total attendance of one thousand eight hundred and sixty-one persons. In 1912, the average attendance was 25, in 1913 it was 32 and this year 34, showing an increased interest from year to year.

This report would not be complete without mention being made of the public spiritedness and the hospitality of several who have given their assistance. Fifty-five beekeepers have at considerable inconvenience allowed their apiaries to be used for demonstrations. In many cases their wives and other ladies of the neighborhood have provided refreshments for the demonstrators and for the beekeepers in attendance. Hundreds of other beekeepers have given a hearty welcome and cordial hospitality to the inspectors on their rounds. All this is very much appreciated both by the inspectors and by the department, and goes a long way towards smoothening the path of the public servant which is not always lined with roses.

Bee Pasturage on the Increase in Florida

We would call attention to the article by Mr. C. H. Clute, of Palmetto, Fla., in a late issue of the Review. While a little over-enthusiastic, perhaps, Mr. Clute surely believes in his location, and is willing to let others know of his great find, as he thoroughly believes it to be. Personally, we are sure that Manatee County is a great honey country; but it has not yet equaled the records of several counties on the East Coast in former years. Heretofore, much of the county was unoccupied by beemen (we mean Manatee county) everybody seeming to think that Bradentown, and immediate vicinity was the only part of the county worth living in at all! As a result, Mr. Rood, one of the first, and always one of the foremost, beemen of that county, had to take up trucking, because so many apiarists insisted on locating large, and often,

many, apiaries right in and about the town, fairly driving Mr. Rood to out-apiaries, and outside interests. I know of no section so thoroughly well stocked, (not to say over-stocked), as the section in and about Bradentown. Ask Mr. Rood, he can tell you! As Mr. Clute says, however, one does not have to go far back from the towns to get away from apiaries. Of one thing we feel sure; not half the State of Florida is yet taken up that is now available, and we fully believe, that the coming years are going to increase, rather than lessen, the amount of bee pasturage. Drainage and development projects are only ONE of the factors, that are sure to change conditions, and with them bee-flora as well.

Holguin, Cuba, April 25, 1915.
Beekeepers' Review,
North Star, Mich., U. S. A.

Dear Editor:—

Note you have listed under "Nat'l Members Having Honey for Sale" a Clover and Basswood Blend from Cuba, neither of which grow here to my belief. Misrepresentations, unclean packages and improper ripening and handling as well as doctoring, is all in the world that makes "West Indian" honey, the most of which is not fit to eat. All of our honeys CAN average as good as American, although different. Honey from bees in logs is selling here now at 10c per gallon net to the producer, solely because it is STRAINED, unripe and unclean, as

well as in many cases, adulterated. No beekeeper in Cuba need complain about prices, if he uses modern hives and proper honest methods. I have never sold any honey for less than 5 cents per pound net to me and from that up to better than \$2 per gallon, according to the package. I make a specialty of "CAMPANILLA" blanco, (not Campanula) and can sell more than I can produce to the native at prices named, he knows this FAMOUS honey and can't be fooled, because of its TOTALLY DIFFERENT flavor, and I let him know I have it. It is not my wish to hurt any brother beekeeper, but to keep him from hurting himself.

Respectfully,

D. W. MILLAR.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON, Ontario, Ore.

FOR SALE—40 cases of "TOWNSEND'S Ultra-Quality" Clover-basswood blend of extracted honey. All other sold.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—Twelve tons of wild buckwheat and blue curl extracted honey in 60 lb. cans. For particulars and price write M. J. Sain, Hanford, Calif.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

FOR SALE—A fine grade of extracted table honey, gathered from Alfalfa and the Clovers. Case of twelve 5 lb. pails \$6.60; case of six 10 lb. pails \$6.25; case of two 60 lb. cans \$10.50. Write for prices on large orders. VIRGIL SIREs, North Yakima, Wash.

Chicago, Ill.—Very little honey of any kind is selling at the present time. The market however is bare of comb honey, and while we cannot quote prices from sales, No. 1 to fancy would bring 17c to 18c per lb. No producer should have any comb to carry to next month with the market in its present condition for it would sell very soon after arrival.

Extracted is plentiful and slow of sale with the exception of white clover and basswood, which like the comb honey, seems to be exhausted and commands 9c per lb., but other white grades can be bought at 7c to 8c per lb. while the ambers can be bought from 5c to 7c per lb. according to kind and quality. Beeswax steady at from 30c to 32c per lb.

May 15

R. A. BURNETT & CO.

173 W. South Water St.

BEEs AND QUEENS

BEEs FOR SALE—100 colonies. J. H. STONEMAN, Box 264, Blackfoot, Ida.

FOR SALE—600 stand of bees and 9 acres Alfalfa farm. No crop failures. Yours at a bargain. J. M. RUYTS, Carlsbad, N. M.

QUINN'S QUEENS OF QUALITY—Grey Caucasians, the long tounded (6.66 m. m.) bee Mendelism does it. Gentlest of all bees. CHAS. W. QUINN, 609 W. 17th Ave., Houston Heights, Texas.

THREE BANDED ITALIAN QUEENS — Also "Golden Beauties" and Carniolans. Tested, \$1.00; untested, 75c each. Bees by the pound and queens in quantities. Write for prices. PAGE BANKSTON, Buffalo, Texas.

GOLDEN, 3 Band and Carniolan queens. Tested, \$1 each; 3 to 6, 95 cts., 6 or more 90 cents each. Untested, 75c., 3 to 6, 70c., 6 or more 65 cents each.

Bees per pound\$1.50
Nuclei per frame 1.50

Ready to go April 1st. Address C. B. BANKSTON, Buffalo, Lion Co., Texas. tf

FOR SALE—Queens, Three Band Italians. Extra good strain. These bees are great hustlers. Only select drones near mating yard. 1 Unt. \$1.00, 6 for \$4.50, \$8.00 per 12. Ready June 15th. D. G. LITTLE, Hartley, Ia.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to Introduce Queens" 15c. "How to Increase," 15c, both 25c. Untested queen \$1.00. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich

BEEES AND QUEENS—During spring and summer months we requeen all our two thousand colonies to prevent swarming. The queens removed from these hives are only one year old and of best of Italian Stock. We offer these queens at 50c each, \$5.40 per doz. Satisfaction guaranteed or money back. No disease. SPENCER APIARIES CO., Nordhoff, Cal.

QUEENS OF QUALITY—Our Hand-Moore strain of 3-banded Italians are beautiful and good honey gatherers. Secured 223 sections comb honey from best colony 1914 season. Only drones from selected queens near mating yard. Breed strictly for business. Untested 75c; half doz. \$4.00; Select \$1.00 Queens mailed promptly or money returned. W. A. LATSHAW CO., Clarion, Mich tf

Calif. queens, nuclei and bees, bred from the best Doolittle stock. Our customers say they are hustlers. A sample order will prove it to you. We can fill any sized order at once. Queens: untested 75c; doz. \$8.00; select, \$1.00; doz. \$10.00; tested, \$1.25; doz., \$12.00; select, \$1.50; doz., \$15.00; tested 1 yr. old, 75c; doz., \$8.00; select, \$1.00; doz., \$10.00. Nuclei, 2 frames \$1.50; 3 frames \$2.25; 5 frames \$3.00; 10 frame colony \$4.50. Bees by the lb.: ½ lb. pkg. 75c; 1 lb. pkg. \$1.00; 2 lb. pkg. \$1.75; 5 lb. pkg. \$4.00. Add price of queens desired to all above prices of bees and nuclei Special discounts on lots of 100 or more. Anyone of the above queens free or 10 percent discount from your order if you will send us the names and addresses of your neighbor beekeepers. Delivery guaranteed. No disease. SPENCER APIARIES CO., Nordhoff, Calif.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

BEST THREE BANDED ITALIAN QUEENS—June to October, mothers selected from more than 100 colonies and reared in hives running over with bees, according to the latest scientific methods. Every queen a dandy. Satisfaction guaranteed. Each, 75 cents. Per doz. \$7.20. Per hundred \$50.00. Also Bees and Honey J. H. HAUGHEY, Berrien Springs, Mich.

GOLDEN or Three-banded Italian Queens ready the first of April.

Tested Queens, each\$1.00
6 or more, each85
Untested, each75
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Special prices on long orders. Everything guaranteed. I. N. BANKSTON, Buffalo, Texas. tf

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 30 new 10 fr. hives, 200 new 10-frame 5¾ in. depth supers nailed and painted (220-10 fr. 40- 8 fr. ext. sup. 5¾ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address Wm. McKIBBEN, Ontario, Ore.

500 SAMPLE QUEENS at 40c on first 500 orders. Moore's Strain Leather Covered Italians. Write for particulars and prices in quantity. April and May orders booked now on 10 per cent deposit. Orders filled promptly, or notice given when such deliveries can be made. Regular prices: Untested Queen, \$.75, Six \$4.25; Twelve, \$8.00. OGDEN BEE & HONEY CO., Ogden, Ut., Timberling Riggs Breeder tf

QUEENS—California queens, nuclei, and bees bred from the best Doolittle stock, ready for shipment at once. Queens, untested, 75 cts; per dozen, \$8.00; tested, \$1.25; per dozen, \$12.00; mismatched, one year old, 50 cts.; per dozen \$5.00; tested, one year old, 75 cts.; per dozen, \$8.00; nuclei, two-frame, \$1.50; three-frame, \$2.25; five-frame, \$3.00; ten-frame colony, \$4.50. Bees by pound: One-half lb., 75 cts.; 1 lb., \$1.00. Add prices of queens desired to all above prices of bees and nuclei. Delivery guaranteed. No disease. Address SPENCER APIARIES CO., Nordhoff, Cal. tf

POULTRY

White Wyandottes and Buff Orpington eggs: \$1.00 per 15, \$5.00 per 100. Healthy, vigorous stock. G. M. Withrow, Mechanicsburg, Ill.

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MISCELLANEOUS

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WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. **WHITE MFG. CO.**, Greenville, Tex.

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LEWIS BEEWARE—Root's Extractors, smokers, etc.—Dadant's Comb Foundation. Large stock always on hand for prompt shipment. Western Beekeepers can save money by patronizing the oldest co-operative association of beekeepers. Illustrated catalogue free. **The Colorado Honey Producers' Association**, Denver, Colorado

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FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address **L. R. BEEBE**, Mosinee, Wis., Route No. 1.

CALIF. Redwood beehives, one story with top and bottom 85c each, supers 25c each, frames 1½c each. Discounts 100 or more 10 per cent. Extracted honey cases 65c each. Medium brood foundation delivered by prepaid freight anywhere in the U. S. 25 lbs. 60c., 50 lbs. 56c., 100 lbs. 52c Other grades in proportion. Highest prices paid for wax. Special discounts on our supplies, catalogue free. **SPENCER APIARIES CO.**, Nordhoff, Cal.

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Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the **U. S. MAILING CASE CO.**, Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

Calif. Redwood hives, single-story 85c; supers 25c; frames 1½c each. 10 percent discount in lots of 100 or more of any of above. Special 5 percent discount on all supplies. Let us show you some of our bargains by sending our catalog. It's free. Also a fine hive scraping tool by mail free if you will send us names and addresses of your neighbor beekeepers. **SPENCER APIARIES CO.**, Nordhoff, Calif.

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There are no better bees than Laws' Italians. Twenty-seven years careful breeding. My bees have taken premiums in my own and others' hands in many of the states of the Union. A single firm having bought over 6000 queens from me in past seven years say, "Your queens are very satisfactory." A queen-breeder who is using my breeding-queens says he could well afford to have paid \$25.00 each for such queens ten years ago. Untested queens, 90c; 12 for \$9.00; 100 for \$70.00. Tested queens, \$1.00; 12 for \$10.00; 100 for \$85.00. Select tested, \$2.00; 12 for \$18.00; 50 for \$50.00. Breeding queens, a large number of as fine queens, tried and tested, as breeders, each, \$5.00; six for \$25.00. Prompt attention to all correspondence.

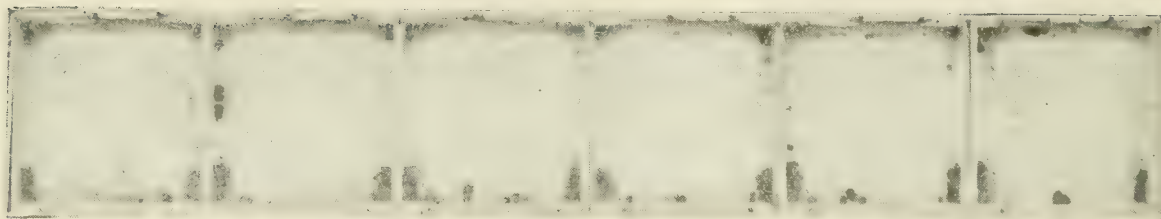
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THE "BOOSTER"

A Popular Paper at a Popular Price

Devoted to the selling end of the honey business. Will give the best and latest methods of selling honey. Just the thing to increase your sales and profits. "Every number is a good number." You should not miss one. 25c for a whole year's subscription, Clubs of 5—\$1.00.

The "BOOSTER"
REDKEY, INDIANA



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.
2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.
3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.
4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

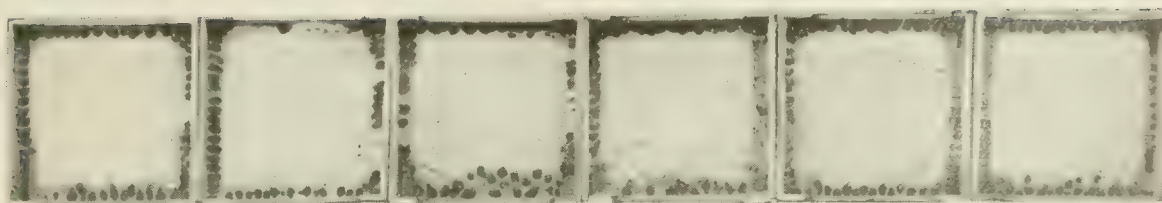
III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.
3. **LIGHT**—No section designated as light to weigh less than ten ounces.

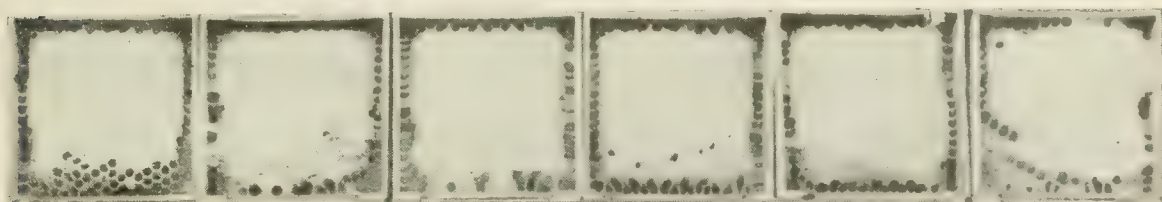
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

COMB HONEY

Fancy:

Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than $12\frac{1}{2}$ oz. net, or $13\frac{1}{2}$ oz. gross. The top of each section in this grade must be stamped, "Net weight not less than $12\frac{1}{2}$ oz."

The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number One:

Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber in color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number Two:

This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES

Honey packed in second hand cases.

Honey in badly stained or mildewed sections.

Honey showing signs of granulation.

Leaking, injured or patched up sections.

Sections containing honey dew.

Sections with more than 50 uncapped cells, or a less number of empty cells.

Sections weighing less than the minimum weight.

All of such honey should be disposed of in the home market.

EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W", "L. A.", "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES

Extracted honey packed in second hand cans.

Unripe or fermenting honey, weighing less than 12 lbs. per gallon.

Honey contaminated by excessive use of smoke.

Honey contaminated by honey dew.

Honey not properly strained.

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59¢ for a \$1.50 Waist means 91¢ to YOU

10,000 beautifully embroidered waists of assorted sizes, up-to-the-minute styles, finest materials and every one a \$1.50 sell must be sacrificed for ready money. Send us 59c. and your Size and you will receive one of these fine waists. \$2.00 gets you a selection of four. Your money refunded if not satisfied.

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Bee People, The, Margaret M. Morley	\$1.50
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Queenie	.75
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Address All Orders

THE BEEKEEPERS' REVIEW
Northstar, Michigan

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each have for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Wilmer Clark, Eastville, N. Y.—150.
A. S. Crotzer, Lena, Ill.—94.
G. M. Withrow, Mechanicsburg, Ill.—25.
L. R. Beebe, Mosinee, Wis.—200.
Wm. McKibben, Ontario, Ore.—160.
Wilmon Newell, College Station, Tex.—100.
The E. F. Atwater Co., Meridian, Ida.—50 to 300.
O. H. Townsend, Otsego, Mich.—300
Robert Gladstone, St. Louis, Mich.—50.

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Every day in your talk and reading, at home, on the street car, in the office, shop and school you likely question the meaning of some *new* word. A friend asks: "What makes mortar harden?" You seek the location of *Loch Katrine* or the pronunciation of *jujutsu*. What is *white coal*? This New Creation answers all kinds of questions in Language, History, Biography, Fiction, Foreign Words, Trades, Arts and Sciences, *with final authority.*

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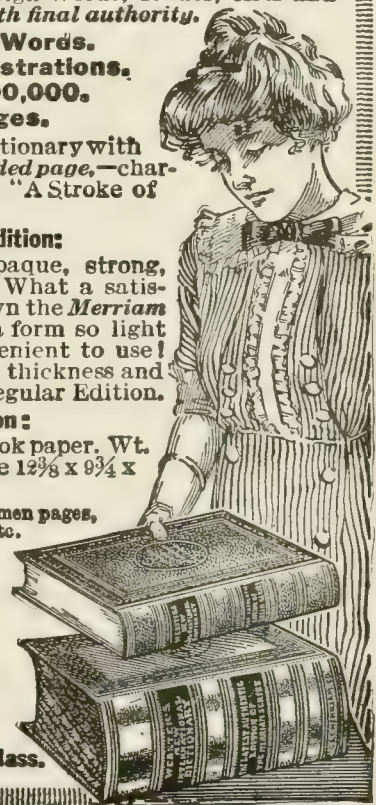
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It's a Long Way to Tipperary

But it's a short way to success if your colonies are headed with queens from THE J. E. MARCHANT BEE AND HONEY CO.

Breeders of the highest grade of Island Bred Italian Queens.

Pure mating guaranteed. Prices as following:

	1	6	12		1	6	12
Untested Queens	\$1.50	\$ 7.50	\$12.00	½ lb. Bees	.....\$1.50	\$ 7.50	\$12.00
Tested Queens	.. 2.00	10.50	18.00	1 lb Bees	..... 2.00	10.50	18.00
Sel Tested	..... 3.00	15.00	24.00	2 lbs. Bees	..... 3.00	15.00	27.50
Breeders	\$5.00 and \$10.00			3 lbs. Bees	..... 4.00	21.00	36.00
Ext. Sel Breeders	\$25.00			5 lbs. Bees	..... 5.50	27.50	50.00
				These prices are without queens.			

We will ship from Canton, Ohio, after June 1st.

We guarantee safe delivery, and a square deal. WATCH US GROW.

The J. E. Marchant Bee and Honey COMPANY

APALACHICOLA, FLORIDA

BUY YOUR QUEENS

from the man who guarantees every one to be purely mated or your queen replaced.

	Before July 1st			After July 1st		
	1	6	12	1	6	12
Untested	\$1.00	\$5.00	\$9.00	\$.75	\$4.00	\$7.00
Select Untested	1.25	6.00	11.00	1.00	5.00	9.00
Tested	1.50	8.00	15.00	1.25	6.00	11.00
Select Tested	2.00	10.00	18.00	1.50	8.00	15.00
Breeders	5.00			4.00		
1. Comb Nuclei	1.50	8.50				
2. Comb Nuclei	2.50	13.00				

Your choice of either Golden or Leather Colored queens by return mail. Above prices on Nuclei do not include queen. You are to select such queen as you wish with the bees and add the price.

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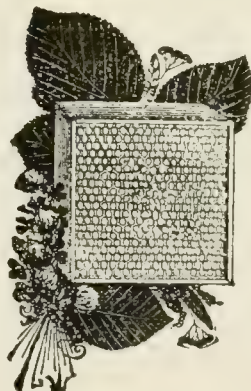
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We quote 250 Paper, post paid for 1.50

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ADDRESS **J. A. PEARCE, Route 1, Grand Rapids, Mich.**

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
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1/2 gallon square round cornered syrup cans, 1 3/4 in. screw cap, per crate of 100.....	5.50
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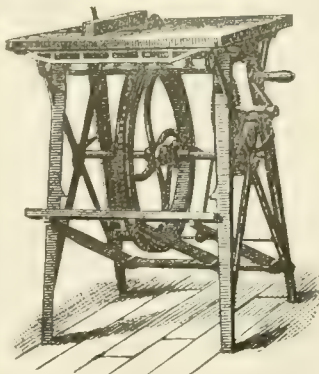
We cannot furnish less than a full crate of the above at any price.

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Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

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ROCKFORD, ILLINOIS

American Bee Journal

ANNOUNCES

Two Big Features--Beginning Jan. 1915

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QUEEN REARING IN ITALY. While in Italy last year, C. P. Dadant had the opportunity to visit a modern queen-rearing establishment. He states that it is the finest and best kept apiary and queen establishment he has ever seen. Full particulars with illustrations in January number,

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Dear Sirs:

I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

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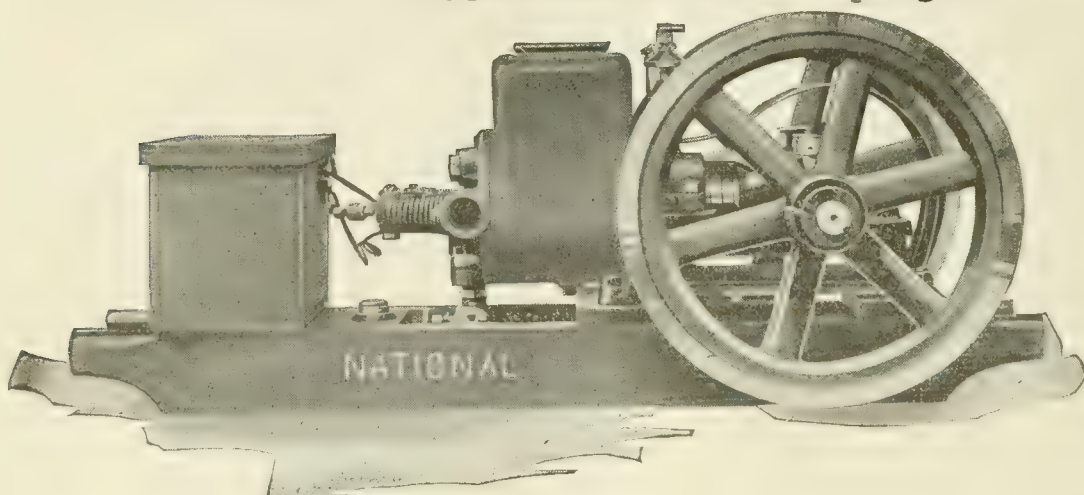
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The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

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The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

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	500 lbs.	300 lbs.	100 lbs.	50 lbs.	lbs.
Medium Brood per lb.	9	10	11	13	14
Thin Brood per lb.	11	12	13	15	16
Thin Surplus per lb.	14	15	16	19	20
Extra Thin Surplus per lb.	16	17	18	22	23

Add one cent per pound for packing in assorted cartons.
Add two cents per pound for packing in one pound cartons.

For the two last named grades, the beeswax must be of pale yellow color, or it will have to be exchanged for light beeswax at an additional cost, according to quality, of one to three cents per pound. The above price includes purifying the wax and making it into as good a grade of foundation as any we ever furnished. But residue, if there be any, and FREIGHT will be charged to the customer. Beeswax must be received by us before foundation can be shipped.

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N. B.—Dark beeswax is preferable to beeswax that has been cleaned with acid, so please do not purify your wax with acid.

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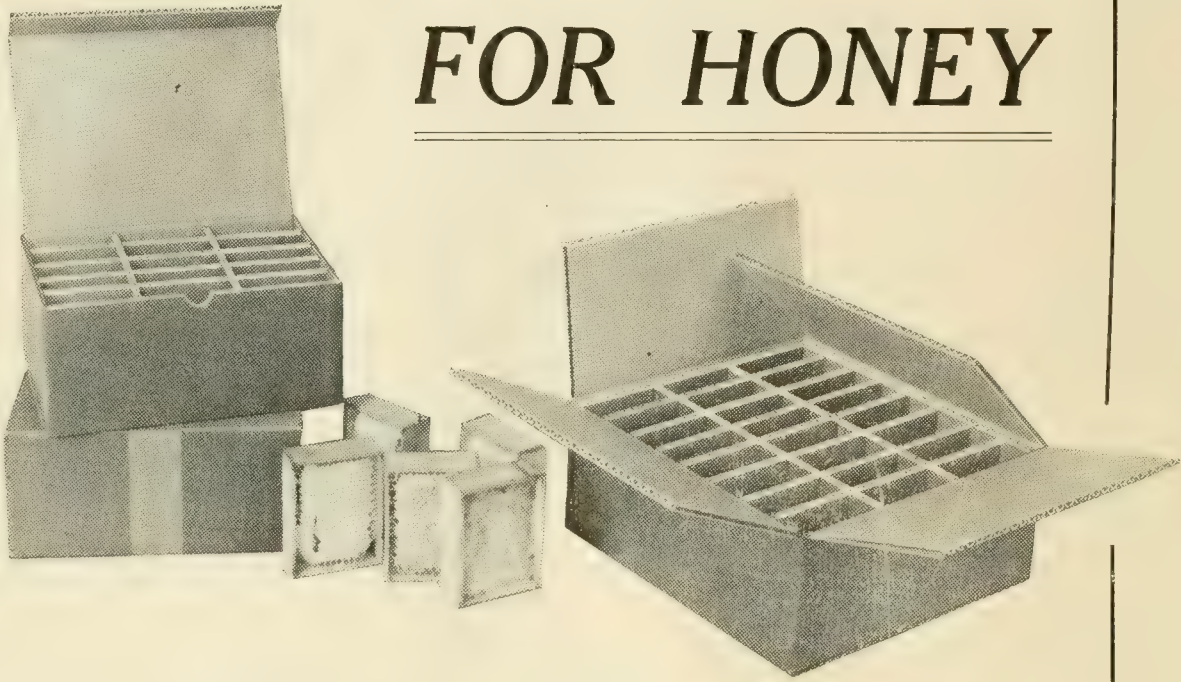
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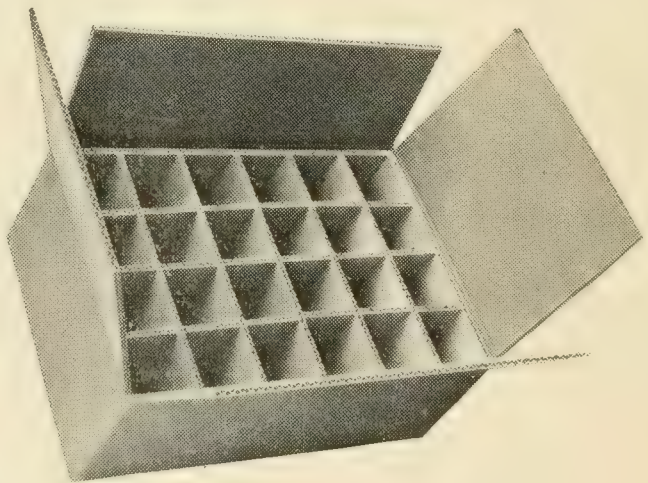


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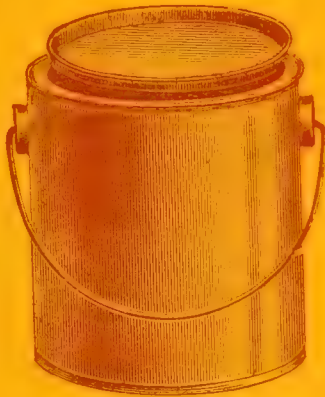
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2 lb. Can		\$2.25	\$2.15	\$20.00
2½ lb. Can		2.75	2.60	24.00
3 lb. Can		3.00	2.85	28.00
5 lb. Pail	\$5	4.75	4.50	42.50
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Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	\$0.60 per case
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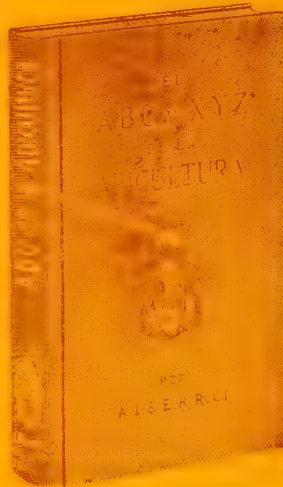
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



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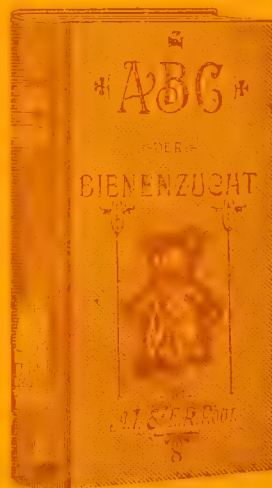
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The Beekeepers' Review

Published Monthly



JULY
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ISLAND BRED QUEENS

Did you ever lie awake nights thinking what a fine thing it would be to have your yard of bees isolated so far from neighbors, or wild bees that no mixing would occur? You could then breed queens from your very best stock and KNOW they would be mated with the very stock you wanted. Don't you see this would make it possible to select your breeding stock to suit yourself, breeding the queen from superior stock, the drones from others. The fact of the case, is, you would have this breeding proposition "under your thumb." The REVIEW has made arrangements with a firm who rear queens under identically the above condition, isolated on an island where there are no bees to interfere, and we will offer our readers queens from this stock during the coming season. This three-banded Italian stock is distinctly a honey gathering strain, and is direct from colonies that gave a surplus of 300 lbs. per colony, during a twenty-four day flow. This strain of pure Italians have been carefully bred up under these favorable circumstances for years, and without a doubt are much superior to any imported stock one can buy. Now it costs money to move a yard of bees to an island for the sole purpose of controlling the mating of queens, and it cannot be expected that these purely mated high grade queens can be sold at the price of ordinary stock. Although the firm who are breeding these queens for us have a thousand nuclei, or mating colonies, we look for a "scramble" after these superior queens this Spring and it behooves the party who expects to secure some of these queens to order early. Order NOW and have the queens mailed later, when you want them. We will begin mailing queens to our Southern trade the first of March, and the Northern trade as early thereafter as the weather will permit. If you want to save the trouble and risk of introducing your queens, they can be ordered in nuclei or with bees by the pound as you choose. Queens go by mail, post paid, and bees by express, not prepaid.

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Tested	2.00	10.50	18.00
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Tested Breeding Queens	\$5.00 and \$10.00 each		

Prices on Bees by the pound f. o. b. shipping point. Shipment begins May 10th:

	1	6	12
1/2 lb.	\$1.50	\$ 7.50	\$12.00
1 lb.	2.00	10.50	18.00
2 lbs.	3.00	15.00	27.50

These prices are without Queens.

Prices on Nuclei and Full Colonies without Queens: Shipping now.

1 Frame Nucleus \$2.00; 2 Frame Nucleus \$3.00; 3 Frame Nucleus \$4.00
5 Frame Nucleus \$5.00; 8 Frame Colony \$7.50; 10 Frame Colony \$9.00

Knowing this stock so thoroughly and the breeder being of National reputation, we do not hesitate to recommend this stock to be as good as money can buy, either imported or domestic. Remember we will book orders in rotation. First come, first served. By ordering now you will be quite sure of getting your queens when you want them. It is quite likely to be different, later. Order with remittance.

THE BEEKEEPERS' REVIEW

NORTHSTAR, MICHIGAN

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AND ITS AFFILIATED ASSOCIATIONS

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PROF. EDWIN G. BALDWIN, Deland, Fla.

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VOL. XXVIII NORTHSTAR, MICHIGAN, JULY 1, No. 7

The Effect of the Cold Weather on Clover

The cold dry weather of May and the forepart of June, coupled with several severe freezing nights during May, has so stunted the meadows that much of the clover is heading out when not more than six inches high, what effect this will have upon the nectar flow remains to be seen. At this writing, June 14th, bees have been working on white and alsike clover, between cloudy weather, gathering a little more than a living, showing that there is some nectar in the blossoms, and we hope for an ordinary flow, although we cannot expect a free flow under the circumstances. It was only last week that we saw a plow start, turning under a field of alsike clover that did not promise well, although there was a good stand. The frost had gotten in its work, then beans are nearly three dollars a bushel.

An Unfavorable Spring for Bees

May, 1915, will go on record as a very unsatisfactory month for beekeepers, especially, in the Northern states and Canada. A mild winter had brought the bees through in usually good shape; followed by an unusually pleasant and favorable April for the breeding of bees, which naturally used up a large amount of stores, leaving many colonies short. Following the nice weather of April, we have had six weeks of about as unfavorable bee weather, as was ever recorded. Cold, unsettled weather, with several freezing nights and in some locations dry, weather about as unfavorable as could be were it made to order. With this condition it is easy to realize the condition of the bees during this period, breeding stopped, drone brood torn down, in fact, only colonies with an abundance of store continued breeding and they on a limited scale. Those that were short of stores stopped breeding entirely and some colonies were practically without brood of any description for several days. The consequences are, bees were in better shape to go into the honey flow May 10th than they were June 10th, they actually being less in number, and aged.

It is now June 14th. Bees have been breeding nicely for the last three or four days, for the cold backward weather let up the 11th of the month, since which time clover has been in bloom, and the weather being such that the bees could fly about half the time, and they have gathered some little honey more than they need to live upon. If we have fairly good weather during the next four weeks, we look for an ordinary crop from Clover.

Data on Orange Bloom in Southern Localities, in Florida

The following letter from a beeman of the S. W. coast speaks for itself.

St. Petersburg, Fla., May 10, 1915

Dear Sir:—

This year so far as citrus bloom (honey) is concerned, has been a complete failure. I am moving my bees to another locality.

E. J. BLAINE.

(Other reports from further south also speak of shortage of orange bloom honey. We begin to feel, here in the neighborhood of Deland that we were fortunate in securing at least an average crop, despite the cold backward Spring and inclement weather during the blooming time. See May issue of the Review for our prospects and the June number for the hive on scales. We regret the

failure of any beeman, wherever he is, to secure a crop for which he has planned, worked and waited; but, like all other agricultural pursuits, Apiculture, even if it is "The poetry of agriculture" is still an agricultural calling; and so long as it is that, it must be dependent, for final results, on weather, locality and local conditions of climate, temperature, all factors beyond man's control. But we always console ourselves for a failure one year by saying, "Never mind! one more chance for a good year next time.")

We have occasional inquiries from beemen in Florida, asking about membership in the National, and relative to the State association. We will therefore, ask our good and wise Editor in chief, Friend Townsend, to answer right here this question, "How does the regulation that no one can be a member of the National, without being at the same time a member of the State Association apply to States, like Florida, for instance, where there is no State or Local association?" If Friend Townsend will append his reply right under this query, it will be a final word, and permanent locus classicus to which to refer all inquirers, along this same line.—E. G. B.

(National Secretary Foster would assign Florida members to the nearer association, which in your case would be the Louisiana. When you organize your Florida association, the paying of your local dues will automatically transfer you to your own state association.—Ed.)

Ants in the Bee Yards

We have just received the following letter of May 15th, from Blackfoot, Idaho, asking for advice on how to rid an apiary of ants. We append the letter, in full:

Dear Sir:—

In one of our out yards we are bothered with red ants, and as you have had experience with them, we would be pleased to have you give us your experience in poisoning them. Scaffolding or placing hive stands in water is out of the question.

We had 20 per cent loss in bees last winter, but most colonies came through strong, and are now two weeks ahead of other years.

Thanking you in advance for this favor we remain

Yours truly,

WEBER BROS.

To this letter we replied to the best of our ability. And thinking that others may possibly have need of all the light they can get along this troublesome line, we here give the substance of the advice we gave our friends, Messrs Weber Brothers of Idaho. It is as follows:

The first thing to do, if possible, is to find and locate all nests that are "get-at-able." These, in Florida, if the large brown (not

red) ants, will usually be under a stone, or log, or in the roots of a decaying tree, or even in the ground, without any other shelter than the earth itself. They make no mound, of any considerable size, but merely a series of holes, opening into the ground, connected by runs underneath the surface. If none are to be seen nearer than 500 feet from the yard, no danger need be apprehended; for we have not known ants to be dangerous farther than that, seldom farther than two hundred feet from the yard, even, are they very likely to send out a foraging force that will prove dangerous to bees. When none are visible, nests we mean, then trace them from a hive that they are visiting, better at night; if a well established line is already in evidence, it will be comparatively easy to follow it by means of a lantern. When the nest, or the nests, are located, then the best way to dispose of the marauders (for they are nothing less), is to dig a hole down to about the center of their run, punching it with a round thick stick, sharpened at the end, like a dibble. Then place a piece of cotton large as your hand, thoroughly saturated with carbon bisulphide, in this hole, and cover quickly with earth again. Let it alone for a few days and if ants are still seen coming out, even in lessened numbers, repeat the dose; this ought to do them up, usually the first application. Of course if they are in a house foundation, or under it, or in a tree root, or old stump that is not rotten, it is harder to get the poisonous fumes right at the ants. Sometimes boring into a stump will answer as well. We did it once even in the foundations of our house by pouring in the poison with a little eye dropper, and then corking up the hole with a small piece of beeswax. We "did 'em up," all right! We have tried gasoline and kerosene, even to setting the latter on fire, but it takes many more applications to clear all the ants out of a nest, than with carbon. We like the carbon best of all. Try it, if you have never done so, you who suffer from these pests. Another good plan, if the nests cannot be located, and the **only** plan then, is to paint the bottom boards of the hives, all possibly, or at least those where the ants are coming, with carbolineum, once every night for a week, then rarer, as the ants cease their depredations. If the ants are attacking the cover, or making their nests under the cover and the secondary cover (as they often do on the coast), then a daub of the carbolineum under the hive cover, on each corner between the super cover and hive cover, will aid materially. They do **not like** this carbolineum, not a little bit! We keep a supply of it on hand in a jug about the bee yard all the time. After all "eternal vigilance is the price of success," with ants as with anything else

that is difficult to manage. Never let up on them. They will never let up on you.—E. G. B.

A Field Meeting at One of Our Beeyards

On June 3rd, one of a series of field meetings Inspector Millen is conducting was held at our Stanton beeyard. As it was one of those regular cold rainy days we are so used to having of late, only about a dozen beekeepers were in attendance. As far as demonstration work was concerned, it would be considered a failure, as no frames could be removed from the hives, only covers being removed to see the strain of bees or how large the cluster, etc. Even with the adverse weather so no bees could be handled, we think all who braved the weather felt well paid for their time and expense, for there was something to talk about all the time, as we were beekeepers.

Mr. Leonard S. Griggs of Flint is one of Michigan's best beekeepers. With just an ordinary location, he is securing very good crops of extacted honey, year after year, which is the only true test for a successful beekeeper. It will be remembered that Mr. Grigg's came into possession of the late W. Z. Hutchinson's bees, also beecellar. In making some changes and extending his business it became necessary for him to build two new bee-cellars last fall. He was a little undecided about how to build them, how to install the ventilators and intakes, etc., and he put his plan before the state convention at Lansing for consideration with the result that he installed an intake and ventilators that ought to be right up-to-date—the intake entering the cellar at a low corner and when well in the cellar, an elbow and intake pipe carried the fresh air to the ceiling before liberating, then the ventilator proper extended to near the cellar bottom so it ought to have carried off the poisonous gases from the cellar bottom. He reported at the field meeting that his ventilator system was a failure, that he lost heavily at both cellars where all this precaution was taken, and the ventilator and intake will be taken out before another fall.

The Hutchinson Cellar

After finding his bees apparently wintering so poorly in the two new cellars, he thought he would take a look into the Hutchinson cellar, to see how things were progressing there. Upon opening the cellar door, not a sound was to be heard, and after the experience in the other two cellars, the thought occurred to him that they were all dead, so quiet was every thing. Were they? No!

They were wintering perfectly, and no loss was sustained in this cellar, but all came out very strong and healthy. Why the difference? The stores were all good, so the difference could not be laid to their winter food, it was the ventilator, or perhaps we better say because they had no ventilator, just a hole through the ceiling large enough so it could be opened as wide as thought best, or contracted at will, the attic keeping the cellar dark. After a little experience, this opening is not changed during winter at all. Simple, but how important.

Palmetto Bloom

There are two varieties of Palmetto, that yield honey in Florida, one is the Scrub Palmetto, the other the Cabbage Palmetto. The former begins bloom about in the southern portions of the State, about two weeks ahead of us, in the vicinity of New Smyrna. This year it began around Bradentown, and that locality about the 10th of May, here, about the 23d. To be exact, we noted the bees humming on the early opening bloom at the Wilson yard, near Oak Hill, at noon of Saturday, May 22d. In about a week more they will be showing whether it is going to yield well or not. All Winter past the rains have been magnificent, and never before have we seen the stalks of bloom, the racemes, so large, so many in number nor so promising generally. It looks like a "Palmetto honey year." But Palmetto honey is of all honeys the least to be counted on; for the bloom is so evanescent and fickle. Too much heat withers and dries it; too much rain, blights and mildews it. Weather must be **just right**, or all the bloom of the State will yield not enough for a good meal! Oddly enough, those portions of the scrub that are burned over by the cattle men one year, are the best for honey the following year; if not burned at all it becomes so thickly choked with undergrowth that the blossoms shortly mildew and blight.

Last year the forest fires were unusually terrific and widespread; consequently this year there is an unusually large area available for bee pasturage. We hope for good things, naturally enough. Later reports will tell what the final outcome is. Bees generally along the East Coast are in fine condition for a good yield, strong and powerful, and a good flow of a few weeks will fill two or three full depth supers so quickly that one wonders where it all comes from. We might add, that, when taken pure, there is no honey anywhere that excels the honey from the scrub palmetto. It is yellow, lemon color, light lemon; the body is thick, rich and heavy; the aroma fine and taste superb. While the bouquet, as it

were, is not quite so exquisite as that of Orange, still the body is a little better even. The palmetto, (scrub) usually lasts about through June. Then will begin the Mangrove and soon, before Mangrove is done, will come the Cabbage Palmetto. These two always blend and are not, in this locality, taken pure, or rather, separately. But both are, fortunately, light in color, and so make a good blend.—E. G. B.

General Correspondence

Advertising Honey

EDWARD HASSINGER JR., Greenville, Wisconsin

Advertising is today the mightiest factor in the business world. It is a business-builder, with an ability that goes beyond human desire. It is a positive creative force in business. It builds factories, and railroads. It multiplies human wants and desires. It furnishes excuse to timid and hesitating ones for possessing which under former conditions they could easily get along without. Before advertising was developed into a fine art, merchandizing was bounded by man's necessities and by his meager knowledge of the luxuries which he deemed within his reach. Modern advertising has made the luxuries of yesterday the necessities of today. It fills the human mind with new and fascinating desires. It has multiplied human necessities that were not considered necessities twenty-five years ago. Advertising is not merely a method of pulling trade away from unprogressive competitors. It has news value as well as power.

It not only supplies information concerning the best and most economical methods of supplying the needs of a normal healthful and comfortable existence, but, operating through well established psychological laws upon the human mind, it gradually implants the idea that certain things are needed which were never before regarded as necessary to human health, contentment or happiness. It enlarges and expands the horizon of man's daily life and experience by bringing to his attention new foods and commodities designed for his health, comfort and convenience without which he would have been perfectly happy in a state of blissful ignorance; but, having learned of their existence, he cannot find it in his heart to be happy or contented until he possesses them. It is the con-

stant reiteration of the so-called "selling arguments" in connection with a product that convinces and finally impells the reader to purchase.

The constant dropping of the water of publicity gradually wears away the stone of indifference. The human mind is so constructed that it is appreciably affected by repetition—and, after all, advertising is only repetition.

"Breakfast cereal" advertising has revolutionized our notions of dietetics, until now it is a generally accepted fact that no breakfast is hygienic or complete that does not begin with a cereal food.

After reading the seductive and persuasive advertisements for a well known substitute for coffee, the person who is disturbed by frequent flutterings and palpitations of the heart, becomes impressed with the notion that he or she has a "coffee heart"; and it is this notion, multiplied and intensified over and over again, that has built up an enterprise employing thousands of persons.

Ten years ago the most enthusiastic advertiser would not have believed the statement that the time would come when such staples as white flour and granulated sugar would be advertised. The white flour miller would have ridiculed the proposition advanced by any advertising agent who sought to draw him into a campaign of publicity. Advertise the "staff of life"? Never. "People cannot get along without white flour or sugar and we will get our share of the trade." But now we see the market flooded with cereal foods of every description, testifying to the popular demand for something that contains more nutritive elements than white flour. Hence we find in these times the white flour miller running into print with expensive and elaborate advertising of particular brands of white flour, each endeavoring to convince the public that his particular brand of "the staff of life" is better than any other.

Advertising is the art of creating a **new want**, but, successful advertising does not stop with publishing the claims that are made for a product. The advertising must not only tell the possible consumer all about the product, but must create in his mind a desire to possess it. It is not enough to say "eat honey" but "**why**" eat honey, and then there is poor honey on the market, and lots of it, if some new customer takes the hint to "eat honey" and buys some that is not good, it will take ten times as much advertising to get that person to buy honey again, and then it will have to say whose honey to buy and "**WHY.**" That's a **new want** is it not? He does not want the honey that he had before, he is convinced by more direct advertising that there is a difference in honey and will want

to try the other fellow's honey, that's a **new want** is it not?

"EAT HONEY" is only a reminder that would answer the purpose very well if all honey was alike in flavor, color and density; it is not, and never will be!

Let every man use a trade mark or a trade name, and your own name is perhaps as good a name as any you can invent.

A local cooperative company with a trade name could sell the honey much cheaper than each man could sell his own—in competition with each other! When we get to that point all the honey produced in a given locality will be all good honey and as near alike as it is possible to be. Then, and not till then will it be easy to form a successful cooperative company to buy and sell all the honey in a given locality in a cooperative way, with a trade mark and name. Meanwhile every man for himself and the best man wins, and that is the man that you want at the head of your cooperative company.

I want to suggest that Geo. W. Williams have those display cards made so that every man can have his name printed on same, to order or leave room on the card for it, so anybody can have it put there.

Leave space between the "EAT.....HONEY."

What is the place of the picture in modern advertising? Is the picture needed to draw the attention of the average reader, and if so, should it be the "whole thing" in the advertisement? Should it illustrate the product advertised, or should it serve merely to attract attention to the advertisement, having no relation to the product advertised and conveying no suggestion as to the article or product which the advertiser desires to sell?

Here is an announcement by Mr. Post, for instance. The rather startling question—"Are You Brainy Enough?"—stares the reader in the face, and you can easily imagine that this man who has spent millions in advertising means to ask you—"Are you brainy enough to understand English without having some comic, curious or unique creation of the artist tossed into your face?" This may not be the question Mr. Post intended to ask.

But you can take it that way. In other words—"Does it require attractive pictures, amusing, startling or unusual to attract your attention to an advertisement for breakfast food?" Strong and convincing talk, short and sweet, and to the point, without any illustrations whatever to help it out, will attract most attention by reason of the very fact that it is different from the rest, but the head line must be strong and catchy.

There are some products that it is necessary to illustrate for advertising purposes. Is it necessary for honey? Yes and no! You cannot illustrate honey itself to advantage and there would be no object in doing so, and I believe in illustrating the product itself, but better than that is to illustrate its use. Why should the advertiser go "around Robin Hood's barn" to bring the commodity which he is selling to the attention of the reader? It's just like some patent medicine advertisements you have read with some interesting talk or story, and then fetches up at the end suddenly and unexpectedly with some reference to "Carter's Little Liver Pills" or some other kind of dope. Why not come out boldly and candidly and take the reader into your confidence at once as though you were not ashamed of the product and not afraid of your ability to hold the attention of the reader? Dr. Bonny, excuse me, your comic post cards may sell honey, but you could not sell **me** any honey with a hundred of your skeleton and graveyard picture post cards; I like to see something more beautiful and refined in connection with "HONEY". There is no doubt but your cards are all right for a certain class of people, but not for **me**. And that only proves that you must advertise in different ways to reach all the different classes of people. Why not have a bear, a boy or even a girl eating honey, with a smile and an "AH! IT TASTES LIKE MORE", that just "MAKES YOUR MOUTH WATER" to look at, and then with that do not simply say "EAT HONEY" or "it's good to eat", but say something like this:

WHY IT JUST MAKES YOUR MOUTH WATER TO THINK OF IT. "DELICIOUS, RICH AND THICK." SUCH IS BONNY HONEY. Address, etc.

"RICH, THICK AND DELICIOUS", with the flavor that tastes like more; such is BONNY HONEY. From the apiary of Dr. Bonny, etc.

"BUZZ-Z-Z-Z STUNG." NO, I NEVER GET STUNG WHEN I BUY BONNY HONEY. Get it from DR. BONNY, Buck Grove, Iowa.

"YOU WILL KEEP SMILING" after once eating BONNY HONEY. It has the flavor and aroma of the blossoms it was gathered from, such is BONNY HONEY, from the apiary of Dr. Bonny, etc. I can give you a dozen more like the above Dr. Bonny, how many do you want, sell 'em cheap!

Say, Dr. Bonny, I know you are coming back at me, go ahead, do your worst. I find that the harder I hit the other fellow with

what I know or do not know, the harder he will hit back with what he knows.

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The different kinds of advertising are: The Newspapers, the Magazines, the Billboard, the Street Car, the Booklet, Window Display Cards and Posters, Moving Picture Theatres, the follow up Letter System, Post Cards, Giving Samples, by mail or otherwise, and Free Newspaper Publicity, Circulars, Blotters and direct salesmen, or canvassers.

I will say a few words about the different kinds of advertising. The newspapers are read by busy people.

The life of the daily newspaper is only twenty-four hours at most.

Its circulation is local, not national.

The less number of pages in a daily paper the better the results.

If you catch the eye of the newspaper reader you must catch it quickly.

The mental attitude of a man who is reading a newspaper is different from the mental attitude of a man who is reading a magazine. The news reader is engrossed in business or in the affairs of the day. If he gets an impression from the advertising he must get it quickly and easily. Therefore the newspaper advertisements must be short, sweet and to the point, and may be changed every day offering a new argument each day.

The life of a magazine is from 30 to 90 days, that is it may be found around the home that length of time. The reader of a magazine is a person that has time to read, and this is the place to tell your story, of your business, how your product is made, etc.

The billboard, the street car, the window display cards and posters are better than newspaper advertisements, because they are always before the public; you have to hold up a newspaper and run into the advertisement accidentally. The classified want column is the best place to advertise a product in a newspaper. There is no doubt that there are exceptions to all rules that we may give, and this is true in all things. I believe advertisements in movie theatres are even better than some newspapers. All classes of people may be reached, and the theatre is dark anyhow, so people are almost forced to read the advertisements if they want to or not.

The follow up letter system is simply sending a letter at regular intervals, and they usually are printed or form letters and should be followed by a booklet that gives a general description of the product to be sold. A certain class of the people are of the

"Missouri type" and want to be shown. They want to see more pictures and read more descriptive matter. No cheap, or carelessly written book will accomplish this purpose. It must be written in such a way as to get the reader beyond the first page. It should read like a story, with an easy expression and gradually lead the reader up to the merit of the product. The reader must come upon the product unawares, he must not see it in the first paragraph or on the first page or even on the second page, if you are talking to him about a honey biscuit you must not hit him with a biscuit between the eyes before he has read the first line. Let him taste the biscuit on the third page. After his appetite is whetted to the point of desire then it will taste good and—he will want more. It must appeal to the mental palate, which, after all, is the most direct route to the physical palate.

I am quite sure that nine out of ten people that eat honey do so for no other reason than simply because they "LIKE IT".

The booklet printed by the Root Co. on the use of honey in cooking is put up in first class shape, but I want to suggest a few changes. First I should change the cover picture, because I know that nine out of ten people do not know that it is a picture of a natural sealed honey comb until they read it or you tell them; if it was inside the booklet and had a margin around the edge of leaf it would be more readily understood, and show up much better. A picture of bees and flowers on the cover, and start the story with bees—they are more interesting anyhow than honey, then lead up to the honey and at the last have the use of honey in cooking on the inside of cover page. As the book is now, it starts out with THE FOOD VALUE OF HONEY. I should change that to DO YOU KNOW THAT? then go on with a little story about the bees, then lead up to honey, etc.

I should have no title for the book, the pictures on the cover should be suggestive enough to arouse the curiosity of the person to open the book and the first catch line is a question, DO YOU KNOW THAT?—There are from twenty to one hundred thousand worker bees in one hive in the summer months, and so and so; many colonies of bees in the U. S. and so; many pounds of honey produced, etc., etc., etc.! The right kind of a booklet will receive more attention than a sales agent.

It is well to offer to sell a sample in your advertisements, but if you are going to give them away I believe it more effective to advertise for some time before giving the samples away in general.

The National Beekeepers' Association Inc.

And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
Amherst, Mass.
 FRANK C. PELLETT, Vice President
Atlantic, Iowa
 WESLEY FOSTER, Secretary-Treasurer
Boulder, Colorado

Directors

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 J. H. STONEMAN.....Blackfoot, Idaho
 E. J. BAXTER.....Nauvoo, Illinois

Affiliated Associations and Their Secretaries

ARIZONIA HONEY EXCHANGE.....
G. M. Frizzell, Temple, Ariz.
 ADIRONDACK—H. E. Gray.....
Fort Edward, N. Y.
 COLORADO—Wesley Foster.....Boulder, Colo.
 CHICAGO NORTHWESTERN—E. H.
 Bruner, 3836 N. 44th Ave., Chicago, Ill.
 HAMPSHIRE—HAMPDEN—FRANKLIN
 Dr. Burton N. Gates.....Amherst, Mass.
 TWIN FALLS—C. H. Stinson.....
Twin Falls, Ida.
 IDAHO HONEY PRODUCERS' ASS'N—
 F. C. Bowman.....Idaho Falls.
 IDAHO—OREGON HONEY PRODUCERS'
 ASS'N INC.—P. S. Farrell.....
New Plymouth, Idaho.
 ILLINOIS—Jas. A. Stone.....
Rt. 4, Springfield, Ill.
 INDIANA—Geo. W. Williams.....Redkey, Ind.
 IOWA—S. W. Snyder.....Center Point, Ia.
 KANSAS—O. A. Keen.....Topeka, Kansas.
 LOUISIANA—L. T. Rogers.....
Box 316, Shreveport
 MASS. SOCIETY OF BEEKEEPERS (East-
 ern)—Benjamin P. Sands, 1051 Old S.
 Bldg., Boston.
 MONTANA—Percy F. Kolb, 134 Broadwater
 Ave., Billings.
 MICHIGAN—F. E. Millen.....East Lansing

MINNESOTA—F. W. Ray, Minneapolis, Minn.
 MISSOURI APICULTURAL SOCIETY
 INC.—Austin D. Wolfe.....Parksville.
 NEW JERSEY—E. G. Carr.....New Egypt, N. J.
 N. CALIFORNIA—Alwin P. Helm.....
16, Fair Oaks, Calif.
 N. MICHIGAN—Ira D. Bartlett.....
East Jordan, Mich.
 OHIO—F. R. King.....Creola, Ohio.
 OREGON—Floyd E. Smith.....Dallads, Ore.
 THE NEW MEXICO BRANCH.....
 Henry C. Barron.....Hagerman, N. M.
 PENNSYLVANIA—H. C. Klinger.....
Liverpool, Pa.
 PUERTO RICO—J. W. VanLeenhoff.....
 Ponce, Puerto Rico, 11 Marina, Ct.
 SOUTH IDAHO AND EAST OREGON
 R. D. Bradshaw.....Fayette, Ida.
 TENNESSEE—J. M. Buchanan.....
Franklin, Tenn.
 TEXAS—H. E. Graham.....Gause, Texas
 VERMONT—P. E. Crane.....Middlebury, Vt.
 VINTON BEEKEEPERS' ASS'N.....
 E. J. Winder.....Vernal, Utah.
 WASHINGTON—S. King Clover, R. No. 1,
 Mabton, Wash.
 WISCONSIN—Gus Dittmer.....Augusta, Wis.
 WORCESTER COUNTY—J. S. Whitte-
 more.....Leicester, Mass.

Selling or giving honey sandwiches at the fairs no doubt is the real thing.

Free newspaper advertising or publicity simply is letting the public know what you are doing, if your bees have wintered well and you are going to increase your bees another one hundred colonies, let the papers know about it, they will print it if you have ever run an advertisement in the paper before, because it is news is it not? Just as well as the local paper will print, "Mr. Jones is remodeling his store front." That is news, and at the same time free publicity.

As to circulars, I do not think much of them, it is cheap advertising, easy come, easy go; it leaves no impression.

Post cards are good and cheaper than letters, and just as direct or personal, or nearly so—I do not mean picture cards.

Direct salesmanship or canvassers get the results if they have the ability to hypnotize the prospective customer before she opens the door. Personally I prefer to reach the people in some other way.

The Development of the Honey Market

E. F. PHILLIPS, Bureau of Entomology

Delivered at Meeting of National Beekeepers' Association, Denver,
February, 1915

The production of honey is but the first step in the course of this commodity on its way to the consumer. The work of beekeeping proper ceases with the preparation of honey for market but in order that the beekeeper may get his rightful share of the retail price, it is necessary that he pay attention to the marketing side of the honey business. The increase in the prices of other foodstuffs, without a corresponding advance in the retail and wholesale prices of honey, has placed a burden on the beekeeper. The present demoralization of the honey market, due in part to the increase in commercial honey production in the United States within the last decade and especially to the recent heavy imports of foreign honeys, makes this question an urgent present one. Conditions are now such that it seems time to examine the situation carefully so that the market may be developed along lines that will result in the most good to American beekeepers.

The Limitations of Co-operation.—The plan of producers uniting to sell their products is attractive in theory and in some cases in actual practice has been found satisfactory. To people of progressive ideas, the principle of co-operation makes a strong appeal and it is not always popular to suggest that there are limits to co-operation. It has been repeatedly proposed and recently again suggested that the commercial beekeepers of the United States, perhaps through the National Beekeepers' Association, organize a co-operative association for the selling of honey, the evident plan being to develop the wholesale honey markets. The true friend of co-operation will do all he can to prevent the formation of co-operative societies which are from their character predestined to failure. I propose, therefore, briefly to give the reasons for the belief that any effort to form a co-operative society from the National Beekeepers' Association is unwise and certain of failure.

There are in the United States over 700,000 beekeepers, perhaps not one per cent of whom could be ranked as professionals. The large number of beekeepers who possess only a few colonies makes any control of the national honey market a most difficult task. Even if all beekeepers were professionals with uniform products, the extent of territory covered would preclude co-operation.

Within the United States there are five distinct honey regions.

The limits of a honey region, as this term is here used, are determined not only by differences in the sources of honey but in the manipulations employed, the character of the product, the kind of beekeepers and the character and location of the market sought. These regions are as follows: (1) the white clover region; (2) the alfalfa region; (3) the moist region of the southeastern United States; (4) the semi-arid region of Texas and adjoining states, and (5) the sage region of southern California. In addition to these main divisions, there are numerous more restricted honey regions, lying within the general regions, among which may be mentioned those characterized by buckwheat, Spanish needle, tupelo, hearts-ease and many other honeys. The beekeepers in any one of these regions are constantly in competition with the beekeepers of all the other regions and most of the commercial producers are aiming to supply the eastern market. In all the history of co-operative movements there can be cited no case of the successful organization of producers of so diverse products and market conditions. The organization of the citrus fruit industry is an example of success in co-operation but the growers in the various producing regions are not members of one society and their various co-operative societies are moreover in competition. To organize the honey business as completely as the citrus fruit business is organized and along similar lines will require not one but dozens of co-operative societies.

Other obstacles to national co-operation may be briefly mentioned. It must be remembered that co-operation is most helpful to the small producer for the extensive producer can develop his own selling organization more advantageously and often more economically than can the association. Many extensive producers would feel that they cannot afford to bear the burden of an organization designed to sell the crops of their weaker associates. It would be impossible at present to get competent leaders in the various localities who would work in harmony for a national co-operative society. The lack of harmony in the National Beekeepers' Association is proof of how little it takes to break the unity of an organization which is composed of men of diversified interests. The most important obstacle, perhaps, is that only a handful of the beekeepers of the United States are familiar with co-operative methods and men must be educated to this idea before they can work successfully together.

Lastly, it is more than probable that the expense of a national co-operative honey selling society would put a heavier burden on both the beekeeper and the consumer than does the present selling system. A co-operative society is organized to replace the middle-

man or system of middlemen with another set of middlemen composed of producers. The cost of getting food from the producer to the consumer is an economic waste and if the waste cannot be reduced by co-operation then the old competitive methods are better. To advocate a national co-operative organization with few trained leaders, too little knowledge of honey markets and no definite plans for improving conditions and then to expect such an organization to reduce the waste of distribution can only be looked upon as visionary.

That well executed co-operation is an advantageous method for handling various products is universally accepted. That this plan of selling may be applied to honey selling has been demonstrated. It should be noted, however, that such organizations have so far had no experience in handling the products of two or more of the previously mentioned honey regions. This is the limitation which existing conditions put upon the co-operative movement among beekeepers. Within a single honey region where all the members are confronted by the same conditions in production and marketing, there is reason to expect success if the members are able to co-operate and if they are so situated as to make individual selling unprofitable. Even smaller units might be advantageous, for the producers of raspberry honey or of buckwheat honey might find it financially profitable to sell together to meet the competition of other honeys. It may even be best to divide by states or even smaller units to reduce overhead charges which increase rapidly with expansion.

The natural growth for any movement such as co-operation will always be from small units to larger combinations. When the United States contains dozens of small co-operative societies for selling honey it will be time to plan, not for one large co-operative society but for a federation of societies, working together to take the edge from the naturally keen competition. Organization from the top downward is not in accordance with the lessons of history and in the absence of success in any such case should not be attempted.

One other point must be mentioned: Efficiency depends on harmony of plan and action and, in co-operation as well as in industrial development, this harmony rests to a large extent on one-man effort. When we find one man who alone can grasp the intricacies of the American honey market, then will be the time for a co-operative federation. To plan for several widely scattered managers in such an organization is to court financial disaster.

Let us, then, if possible, have co-operative honey marketing,

but let it be planned, organized and conducted in accordance with facts. To form a society along wrong economic lines might work an injury to the honey business from which it would not recover for years.

The Development of the Home Market.—The selling of honey directly to the consumer has frequently been advocated. Not all beekeepers are so situated that they can do this, but where the development of a home market is possible it is more profitable than any other method of selling honey. Honey, unlike many other agricultural products, is not a necessity. It never appears on the tables of thousands of families, not because the members of the family do not like honey, but because they never see it or hear about it. Evidently there is no overproduction at present. Success in selling directly to the consumer is based on the fact that under normal conditions the amount produced is not adequate to supply one-tenth of the demand which can easily be created. We buy most of our food products through grocers, except that certain quickly perishable products may be rushed to the consumer by the producer or his agent. Honey is not perishable but for some reason the house to house method of selling has proved more profitable than any other. This may be due to the diversity in the honeys put on the markets, which makes it difficult for grocers to sell and to the failure of beekeepers to realize the desirability of blending honeys.

The successful honey salesman combines the producer, the blender, the advertiser, the traveling salesman and the grocer and by doing the work of all he gets the profits of all, provided he demands the proper price, which many beekeepers fail to do. Not every beekeeper can or desires to do this work, but if through the National Beekeepers' Association the beekeeper who wishes to buy honey for his market can get in touch with the beekeeper who has honey to sell but who has no home market both are benefited. So long as the supply of honey is so meager it is still a question whether the development of more extended markets will pay.

The chief reason why beekeepers should advocate the development of home markets is to keep honey away from the large honey markets, where the prices are determined. At present extracted honey is as low as ever before, because so much of it is piled up in the honey market centers with no buyers. The American people could eat in a couple of weeks, without indigestion, all the honey now on these markets and would gladly pay several times the price now asked if someone would only take it to them.

The development of the home market is not in harmony with

the co-operative idea. The beekeeper who has made a success in his local market of selling all his honey, as well as that bought of other beekeepers, would be the last man to profit by joining a co-operative society for selling honey at wholesale. The only ones who would profit from a national co-operative society are the beekeepers who have no home market within reach and who cannot sell to other beekeepers. This limits the possible advantages to a small number.

In the development of a home market, many beekeepers err in selling only honey of the type which they themselves produce. For example, a comb-honey producer often does not sell any extracted honey, although some of his customers doubtless prefer it. Since the same amount of canvassing would sell either comb, table-extracted or cooking-extracted honey it would be worth a trial to sell all three kinds and possibly different grades of each to suit the individual demands.

Every beekeeper knows that it is difficult to get the same honey year after year. The desirability of selling blended extracted honey rather than honey of only one source, in order to overcome this variation, is often overlooked. Beekeepers are highly educated in judging honeys, know the flavors of the various kinds and have their preferences. They often have the mistaken notion that they must educate their customers to this standard. Let us examine another table commodity to get the proper prospective. There are those who are just as particular about teas as we are about honey. The person educated in the flavors of teas knows the various types of teas, recognizes their flavors and is most particular about the kind he uses. By the expenditure of the necessary time and effort we, too, could become educated in tea flavors. We are not, simply because we have no interest in such things and do not think it worth while. Apply this idea to the average honey eater and it is evident that he knows nothing about honey flavors and cares less. Most of us do not like the variations in unblended teas and all we ask is that we shall get the same each time we buy a package. We lose the delicacy of flavor but are willing to do this for we dislike changes in food standards. The honey consumer asks only that we shall not experiment on his palate by offering him a different flavor every time we sell him honey. We must, to satisfy the average consumer, to whom we are most anxious to sell, iron out the variations in flavor by blending. What is here advocated is now being practiced by all of the successful bottlers of honey for the large markets, so that it is no new idea.

Who Should Develop These Markets?—House-to-house selling

of honey is not beekeeping and can be done by anyone who will give the subject the proper attention. There are, however, certain reasons why the beekeeper can do it just a little better than anyone else. He has time to sell honey during the winter and his special advantage is that he knows how the honey is produced and can use that knowledge and stories about bees as valuable talking points. The consumer will feel more confidence in buying from a producer.

The success of beekeepers who have tried this is sufficient to justify advising it as the best method, at least until a better method is found. A long list could be made of beekeepers who profit more from selling honey than they do by producing it. The parcels post has increased sales directly to consumers in many commodities. While this is still in an experimental stage and while consumers often express dissatisfaction at the results obtained, it is a legitimate function of the National Beekeepers' Association to investigate the possibilities of marketing honey in this way and to give the members the benefit of the results. Work along this line gives far greater promise of profit to the beekeepers of the country than does nation-wide co-operation.

Advertising and Publicity.—Next to the idea of big co-operative plans, the proposal to carry on a huge campaign of advertising and publicity appeals to some as desirable, at least it often appeals so long as one is not asked to contribute liberally to support it. It ought not be necessary to point out that either co-operation or common ownership of the product is necessary before advertising can be carried on at a profit to those who pay the bills. The public is admonished to eat Florida oranges, which are handled co-operatively, but one rarely sees advertisements urging the public to eat bread or to use soap. We may be told that Jones' soap is the best, but Jones pays the bills and not all soap makers.

The small crop of honey now harvested could not supply a demand any greater than that now existing for, except in unusual cases, all the honey produced is sold in a few months. Advertising would presumably create a demand for the entire year and there is no honey to supply the increased demand. Publicity might raise prices somewhat, but it could not increase the supply.

Publicity is a sharp-edged tool which may cut both ways. An inexperienced man attempting a campaign of publicity could do more harm and spend more money to no advantage in a few hours than he is worth in ten years. There seems to be an idea current that all that is necessary is to give newspaper editors stories about bees which contain hidden advertisements and that the editors

will do all the work and pay all the bills. Newspaper men have had plenty of experience with efforts to obtain free advertising and have successful methods of combating such work. If we want honey and bees to receive the attention in the press which they should normally have, the indiscreet public discussions of publicity plans should be stopped.

The Field of the National Beekeepers' Association in This Work.—We all know, even though we may not care to admit it, that the National Beekeepers' Association lacks a policy. This plain statement is not intended to give offense to those who have earnestly tried to make something of the association. Some of the best informed beekeepers in the United States have several times within the past year conferred together to see what could be done, but in no case that has come to my notice has there seemed much hope. If the National Beekeepers' Association is to live, it must settle on a definite policy and carry it out.

Not all are agreed as to the rightful function of a national association. In view of the widely diversified interests of the members, many believe it best to avoid the financial side of the beekeepers' dealings. It might be possible to help members in the purchase of supplies but it is of questionable propriety for an association so far in debt as the National Beekeepers' Association is to assume such large financial obligations.

While I, personally, am of the opinion that such transactions are wrong in principle, it is well within the province of this association to help members to make or save money. The marketing of honey to better advantage to the producer is certainly one of the problems which might be taken up and many feel that the National should take this up before the other problems which present themselves. Those who want the National Beekeepers' Association to do something—anything—will unquestionably be glad to fall in line with this project. It has been shown that a national co-operative society would not be worthy of support and it would probably not receive much support. To prevent glutting the chief honey markets, honey must be kept away from there and, further, the beekeeper, the man in whom we are interested, can make most by the development of a home market. I therefore desire to propose that the National Beekeepers' Association conduct a vigorous campaign among beekeepers to encourage them to sell their honey locally wherever possible, to help them to get additional honey directly from other producers who have no home market, and wherever possible to point out unworked retail markets. If these things can be done without spectacular notoriety, it will revolution-

ize the honey markets and it is perhaps not too much to say that, if this can be done, even the conditions brought about by the European war need not seriously harm the beekeeper.

The National Beekeepers' Association, being composed in large part of beekeepers with less than fifty colonies, can do much toward educating beekeepers to produce a higher class product, which is much needed. It can point out the mistake which beekeepers often make of producing the wrong type of honey. Furthermore, when the National Beekeepers' Association enlists the interest of more of the large producers and gets strong enough to inspire confidence, it might assist in the organization of regional and local co-operative associations. It must from its nature be maintained as an educational, protective and mutually beneficial association and, just in so far as it departs from these principles and enters into direct commercial dealings, to that extent it becomes weaker and loses the confidence of beekeepers.

The Pearce Method of Beekeeping

J. A. PEARCE, Grand Rapids, Michigan

Rostock, Ont., Can.
August 12, 1914.

J. A. Pearce, Esq.,
Grand Rapids, Mich.,
Dear Sir:-

Having read your notes on cause of swarming and swarm control in August issue of the Review. Having found out myself with some colonies that that was the best possible way I am enclosing 20 cents postal note if you would be so kind and answer the following questions.

1st. Do you winter them in two chambers or only one?

2nd. If you winter in two chamber as your notes read, do you have to feed some years or is there always enough honey in the two chambers to last till next honey flow?

3rd. If there is plenty honey left in them for winter I should think a super and a half super would be sufficient for mine as I put mine in a ten frame hive, also would the queen enter a half super comb as readily as a full Langstroth comb. I have the Langstroth hive.

4th. If you feed for winter, that is if you do any feeding at all with your two chambers. Do you wait till all brood is hatched or do you feed before on account of a large

brood chamber?

5th. Do you requeen every year or not?

6th. Do you put any absorbent on top of hive for winter?

7th. If there was about two combs of pollen left in brood chamber in fall would you leave it there or take it out?

8th. How large is your entrance and what method of ventilation do you use to keep them cool during the honey flow?

Kindly send back this letter so I will know correct answer in rotation I am,

Your Beekeeper friend,

A. J. KREUTER.

R. R. 1, Grand Rapids, Mich.

August 15, 1914

Mr. A. J. Kreuter,

Dear Sir:—

Your very good intelligent letter with Canadian postal note for reply came to hand yesterday and I hasten to reply to it to the best of my ability. I am pleased that you also have been testing a larger brood chamber and are so well pleased with it. For I felt for several years that I stood almost alone with it for all the big beemen like the Roots, the Millers, the Doolittles, the Hutchinson and Town-

sends and the rest were all using a hive about half as large as mine and I almost had to pinch myself to make me believe I was right, but now many are becoming convinced that they are using too small a hive and are changing to a larger one and I feel sure that in 50 years more will be as few small hives in use as there are large ones now.

In regard to your first question as to whether I winter in the two bodies or only one. Yes, I winter always in the two bodies. This I find has about completely done away with winter loss, which has hitherto been the greatest disaster to beekeeping. In fact I now wonder that as many bees are brought through the winter in those shallow hives are there are. When we realize that bees cluster down at the bottom of the hive at the beginning of the cold weather and travel only upward for their stores, we then see the necessity for a goodly supply of stores directly above them as they would starve with a quarter of an acre of honey all about them, if none was in the comb above them. And with this big supply of honey on hand they are not afraid to start plentiful brood early, a most essential thing to insure a large stock of bees in time for the harvest.

Question No. 2. As to having to feed some years. I will say with the two bodies on and filled up we never have to feed. One of the first I put up over 20 years ago in a stable loft, have cared for themselves continually and have never been fed. No they are safe from year to year and make beekeeping the most automatic business I know of.

Question No. 3.—In regard to a super instead of a full body would not be sufficient on 10 frame hives. Yes it would do fairly well for winter but would not be so safe as a full body. It would put you in a hole when you take off your white honey and want to double up your apiary as we do by just setting these bodies apart and putting in new queens on queen cells and putting a new top body on each to make your increase if you desire it, and double your apiary or let them alone as you desire. Then too, the half body on top would not give the room that is so much desired or go near so far towards preventing swarming naturally. You see

the point. I will just say here if you wish to go from the single hive method to the double hive, the best time of all to do it is when you remove your white honey about near the last of July in this latitude, then put on your extra bodies. The queen will not enter sections on half-stories quite so readily as full bodies.

4th Question—I do not feed at all. If I had to feed to build from the single to the double hive I feed with an inverted tin 10 lb honey pail with the lid finely perforated like the pepper box feeder. Early feeding is preferable, regardless of Brood. Do not wait for brood to hatch.

5th Question—Do you re-queen every year? It is better to re-queen each year but we do not always do it.

6th Question—Do you put on absorbents for winter? Yes emphatically; yes about as good a thing is a comb honey super or something like it with a burlap tacked on the bottom and filled with clothes, leaves or chaff. Be sure to make everything snug as there will be no draughts up through the hive.

7th Question—As to amount of pollen in hive. Leave all pollen possible. And in addition we supply artificial pollen with cotton seed meal or ground oats or regular ground horse feed placed out in dishes before natural pollen comes.

8th Question—As to size of entrance and method of ventilation I leave entrance full size, full width of the hive generally unless we contract for robbers or something like that. Use your own judgment about that; as to ventilation, I never give any, where our bees are in under cover out of the sun as they are with us. I let the bees tend to that. I have placed some of these double hives in terribly hot attics, but they seem to do equally as well as where it is not so hot.

This I think answers all your questions quite fully. I hope it will be a help to you in getting started right.

In conclusion you will notice I always use and recommend for a brood chamber two 8 frame standard hives, one above the other always.

With best wishes, I am.

Yours truly,
J. A. PEARCE.

Kindly fill out Crop Report Blank on page 271 and return to this office.

Ft. Smith, Ark.,
August 12, 1914.

Bee-Keepers' Review,
North Star, Mich.
Gentlemen:-

I would like to say, in regard to the Review cover, that I liked the plain one you used for a few issues best.

Wishing you success, I am,
Most sincerely,
L. E. KERR.

P. S. I wonder why 16 frames in a wide hive would not give the same results as two 8 frame bodies in the Pearce Method.

L. E. KERR..

Rural 1, Grand Rapids, Mich.,
October 31, 1914.

Mr. L. E. Kerr,
Ft. Smith, Ark.

Dear Sir:-

In reply to your inquiry in the Review as to whether the same results may not be obtained with a hive with 16 frames wide as with two 8 frame hives piled one on the other as in the Pearce Method. Will say in reply that it makes all the difference possible, which I will try to explain to you.

It is like this: A normal colony of bees left to themselves place their surplus stores above them. This we fully understand, as we always place our surplus cases above the bees if

we expect to get any honey. So, after placing their surplus stores above them, and to make sure it is directly above them, they put their first honey in the top center of their receptacle as we notice in taking off our section honey. We observe if there are unfinished sections they are in the corners of the surplus cases. Thus you see it is their intention to have a round compact body of honey directly above them. This seems to be why they prefer a tree because the hollow is round and long up and down. With the honey thus stored above them and well sealed up at the approach of cold weather, the bees drop down to the bottom where the last brood is hatched out and there they cluster in a round ball among the combs, with their heads upwards, and prepare to ascend during the long winter in this direction. As you see they could not hang with their heads down, neither could they lie on their sides during the whole winter, hence we see the absolute necessity for having adequate stores directly above the bees, and this is just why we put this extra hive body above them, to make sure that they will have ample stores to eat up into and not starve, no matter how long or severe the winter may be.

Then we will see how manifestly unfair it would be to place these other eight combs out on their sides where

Eat Honey

GEORGE A. BOYUM

"Dear Me! Dear Me!"

Said a little bee.

"What are we to eat?"

We haven't any pastries

And we haven't any meat!"

In answer to her the queen bee said:

"We'll dine on something better instead,

We'll eat some delicious honey with bread!"

The bee was pleased, so pleased was she,

That ever since the honey bee,

Has lived on bread and honey.

Another lesson learned have we,

From the little honey bee—

EAT HONEY

they are entirely beyond where they can reach them, in cold weather, as in no way can they get out from between the combs they are between to go to others. So if they did not have adequate supplies above them they would starve with, as I have before said, a quarter of an acre of honey all about them, if not in the spaces they are clustered in. This, I think, will make it clear to you why we should place the storage receptacles above rather than on the sides of the bees. And this placing the extra hive body above, is one of the fundamental principles of the Pearce Methods.

Attention Iowa Beekeepers

The Polk County Beekeepers' Association will hold its annual picnic and field meet the second Wednesday in July at the N. J. Harris apiary about one mile north of Highland Park, a suburb of Des Moines. Arrangements are being made for several good speakers and a number of demonstrations will be given. This will be a basket picnic, each one taking his own lunch. The picnic is not limited to members of the Association nor to beekeepers residing in the Polk county. Beekeepers from all over the county are welcomed and a large attendance from outside the country is expected.

Respectfully,
The Polk Co. Beekeepers' Ass'n.
H. Scranton, Sec.-Treas.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON, Ontario, Ore.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—Twelve tons of wild buckwheat and blue curl extracted honey in 60 lb. cans. For particulars and price write M. J. Sain, Hanford, Calif.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

WANTED—White Comb new crop 11 and 13 oz. weights well capped. To be packed in cartons we will supply. Write at once quality, quantity and price. HOFFMAN & HAUCK, Woodhaven, N. Y.

WANTED—A car or less of White Clover, Raspberry and Basswood extracted honey, in 60 lb. cans. Also glassed comb honey. I. J. STRINGHAM, 105 Park Place, N. Y.

CHICAGO—There are very few sales of comb honey to report on, but white comb has sold freely at 17c to 18c per lb. There is no surplus on sale, as receipts are chiefly small lots from parties who have kept more for their home market than was needed.

Extracted is without change, very little being sold. Prices on the amber grades range from 5c to 7c per lb., white 7c to 9c per lb. according to kind and quality.

June 15

R. A. BURNETT & CO.,
173 W. South Water Street.

BEEES AND QUEENS

BEEES FOR SALE—100 colonies. J. H. STONEMAN, Box 264, Blackfoot, Ida.

FOR SALE—600 stand of bees and 9 acres Alfalfa farm. No crop failures. Yours at a bargain. J. M. RUYTS, Carlsbad, N. M.

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. BEEBE, Mosinee, Wis., Route No. 1.

MY GOLDEN ITALIAN QUEENS are extra fine. One untested \$1.00, tested \$1.50. Extra select tested \$2.00. No disease in neighborhood. F. M. ALLEY, 697 N. Cottage St., Salem, Ore.

FOR SALE—Queens, Three Band Italians. Extra good strain. These bees are great hustlers. Only select drones near mating yard. 1 Unt. \$1.00, 6 for \$4.50, \$8.00 per 12. Ready June 15th. D. G. LITTLE, Hartley, Ia.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

GOLDEN or Three-banded Italian Queens ready the first of April.

Tested Queens, each	\$1.00
6 or more, each .....	.85
Untested, each .....	.75
6 or more, each .....	.65

Special prices on long orders. Everything guaranteed. I. N. BANKSTON, Buffalo, Texas.

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5¾ in. depth supers nailed and painted (220-10 fr. 40- 8 fr. ext. sup. 5¾ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain. Address Wm. McKIBBEN, Ontario, Ore.

QUINN'S QUEENS OF QUALITY—Grey Caucasians, the long tongued (6.66 m. m.) bee Mendelism does it. Gentlest of all bees. CHAS. W. QUINN, 609 W. 17th Ave., Houston Heights, Texas.

Why not re-queen your bees this fall with the best of Doolittle stock? We offer special prices of 75c each, \$7.20 per dozen, or \$54.00 per hundred. It will pay you to give this stock a trial. SPENCER APIARIES CO., Nordhoff, Calif.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to Introduce Queens" 15c. "How to Increase," 15c, both 25c. Untested queen \$1.00. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich

BEST THREE BANDED ITALIAN QUEENS—June to October, mothers selected from more than 100 colonies and reared in hives running over with bees, according to the latest scientific methods. Every queen a dandy. Satisfaction guaranteed. Each, 75 cents. Per doz. \$7.20. Per hundred \$50.00. Also Bees and Honey J H. HAUGHEY, Berrien Springs, Mich.

QUEENS OF QUALITY—Our Hand-Moore strain of 3-banded Italians are beautiful and good honey gatherers. Secured 223 sections comb honey from best colony 1914 season. Only drones from selected queens near mating yard. Breed strictly for business. Untested 75c; half doz. \$4.00; Select \$1.00 Queens mailed promptly or money returned. W. A. LATSHAW CO., Clarion, Mich tf

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

WANTED—Beeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR SALE—400 Comb Honey Supers made up mostly 10 frame in lots of 10 or more 40c. 100 lots 35c each. W. D. SOPER, Jackson, Mich.

HONEY LABELS and Printing at lowest prices, 36 page catalog free. "Get our Beekeepers' Special Printing Offer." LIBERTY PUB. CO., Sta. D., Box 4 J, Cleveland, Ohio.

LEWIS BEEWARE—Root's Extractors, smokers, etc.—Dadant's Comb Foundation. Large stock always on hand for prompt shipment. Western Beekeepers can save money by patronizing the oldest co-operative association of beekeepers. Illustrated catalogue free. The Colorado Honey Producers' Association, Denver, Colorado

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using Eureka Paste. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

POULTRY

White Wyandottes and Buff Orpington eggs: \$1.00 per 15, \$5.00 per 100. Healthy, vigorous stock. G. M. Withrow, Mechanicsburg, Ill.

FOR SALE — Buttercup hatching eggs. Champion layers of extra large pure white eggs, larger than Leghorns and eat only half as much. 15 hatching eggs, price two dollars. Thoroughbred stock, for sale cheap. Tom Barron's English White Leghorns, world's champion layers, six times winners in great laying contests such as the state poultry experiment stations at Mountain Grove, Missouri, and Storrs, Conn. Not show birds but the world's best for egg production. 15 hatching eggs, price \$3.00. HENRY WOODWORTH, Box 505, Cheboygan, Mich.

Buffalo, Texas, June 5, 1915
Gentlemen:—Please discontinue my ad. as I have all the orders I can fill this season. Have had good results from advertising in your paper.

Yours resp.,
PAGE BANKSTON.

Beekeepers To Hold Meeting

A field meet of the Louisiana State Beekeepers will be held Saturday, July 17, at G. Frank Pease's Apiary, five miles northwest of Shreveport, on the Mooringsport model road. Demonstrations and talks on bee culture will be the order of the day, followed by a business meeting of the association to transact all business that may properly come before the body. Everybody interested in bees is cordially invited to attend. Automobile service from Shreveport to apiary.

G. Frank Pease, President.
L. T. Rogers, Secretary Treasurer.

Queens of MOORE'S Strain of Italians

PRODUCE WORKERS

That fill the supers quick
With honey nice and thick.

They have won a world-wide reputation for honey gathering, hardiness, gentleness, etc.

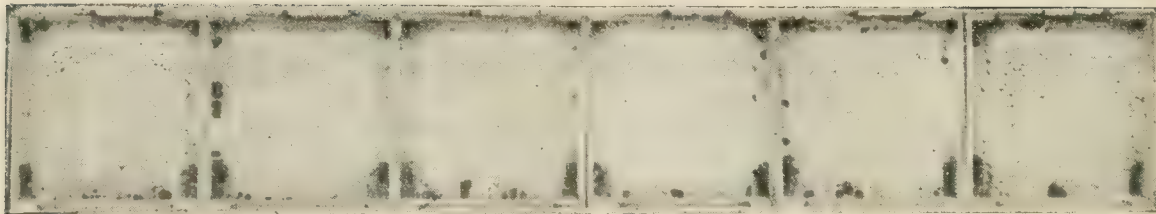
Untested queens, \$1.00; six, \$5.00; 12, \$9.00.

Select untested, \$1.25; six, \$6.00; 12, \$11.00.

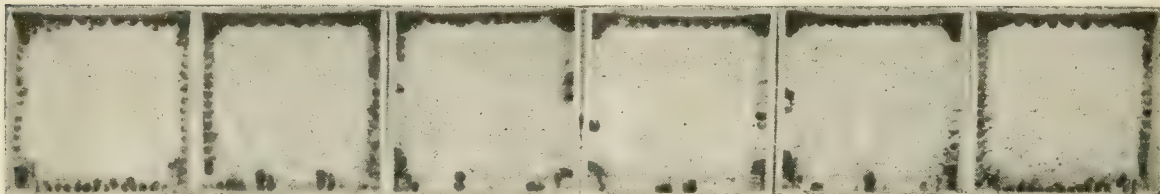
Safe arrival and satisfaction guaranteed. Circular free.

I am now filling orders by return mail.

J. P. MOORE,
Queen-breeder. Route 1, Morgan, Ky.



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

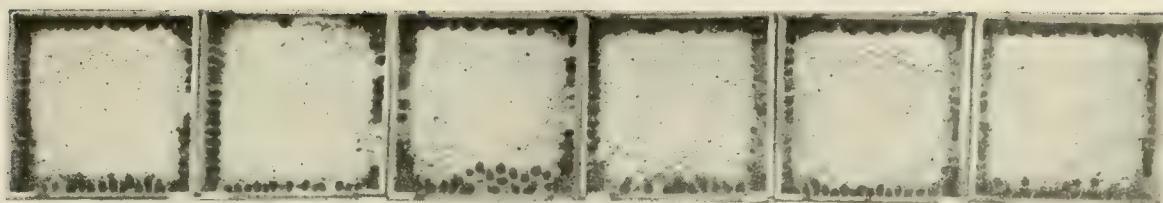
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

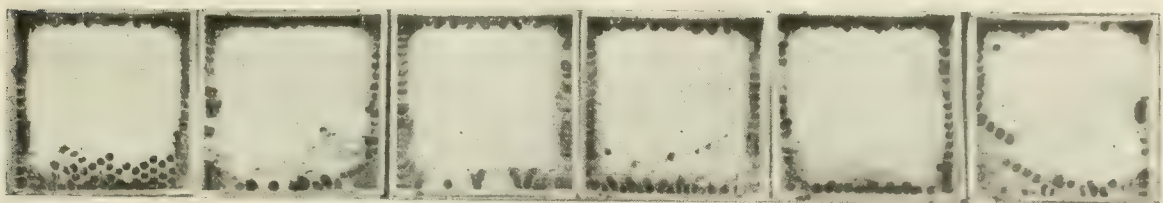
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

COMB HONEY

Fancy:

Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than 12½ oz. net, or 13½ oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 13½ oz."

Number One:

Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber in color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number Two:

This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES

Honey packed in second hand cases.

Honey in badly stained or mildewed sections.

Honey showing signs of granulation.

Leaking, injured or patched up sections.

Sections containing honey dew.

Sections with more than 50 uncapped cells, or a less number of empty cells.

Sections weighing less than the minimum weight.

All of such honey should be disposed of in the home market.

Extracted Honey

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W," "L. A.," "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can, shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES

Extracted honey packed in second hand cans.

Unripe or fermenting honey, weighing less than 12 lbs. per gallon.

Honey contaminated by excessive use of smoke.

Honey contaminated by honey dew.

Honey not properly strained.

Do not fail to fill out the report blank on next page: in doing so, kindly do not say what you expect to get, but is now upon the hives.

BOOKS ON PRACTICAL BEE CULTURE

Mailed Post Paid Upon Receipt of Price

A B C and X Y Z of Bee Culture, cloth	\$2.00
A B C and X Y Z of Bee Culture, half leather	2.75
A B C and X Y Z of Bee Culture, German	2.50
A B C de L'Apiculture, French ed.	2.00
El A B C and X Y Z de la Apicultura, Spanish	2.50
Langstroth on the Hive and Honey Bee Reprint	1.00
Advanced Bee Culture, W. Z. Hutchinson	1.00
Biggle Bee Book	.50
British Beekeepers' Guidebook, Cowan	1.00
Cook's Manual of the Apiary	1.15
Doolittle's Queen-rearing	1.00
Fifty Years Among the Bees, C. C. Miller	1.00
First Lessons in Beekeeping	.50
Honey Bee. The—Cowan	1.00
How to Keep Bees—Mrs. Comstock	1.00
Humble Bee, The—F. W. L. Sladen	3.25
Irish Bee Guide, Rev. J. G. Digges	1.00
Langstroth, Rev. by Dadant, cloth	1.25
Modern Bee Farm, S. Simmins	2.00
Quimby's New Beekeeping	1.00
Wax Craft	1.00
Increase Forcing the Queen to Lay; each	.25
French edition, separate	.50

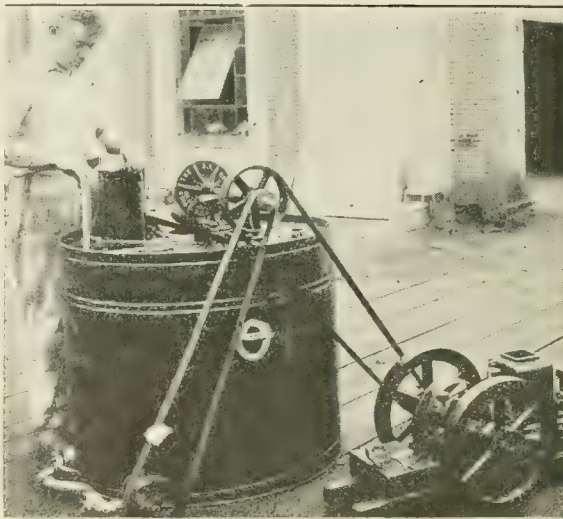
POPULAR BOOKS ON BEE CULTURE

Bee People, The, Margaret M. Morley	\$1.50
Children's Story of the Bee	2.00
Honey Makers, The, Margaret M. Morley	1.50
Life of the Bee, Maeterlinck	1.40
Bee Master of Warrilow, The—Edwards	.57
Lore of the Honey Bee	2.00
Queenie	.75
Bee Models	each 50c; 2 for .75

Address All Orders

THE BEEKEEPERS' REVIEW
Northstar, Michigan

Install a ROOT AUTOMATIC EXTRACTOR and HONEY PUMP, then run them with a NATIONAL 1½ H P. ENGINE and you will then have an outfit "par excellence" to do your extracting with.



Root Automatic Extractor, National Engine and Honey Pump in Position.

A one inch galvanized pipe, threaded with elbows, transfers the honey from the pump to the honey tank at one side.

We quote the engine, four-frame Automatic Extractor, including honey pump, belting and everything necessary pertaining to the outfit at \$86.50.

Six-frame extractor outfit as above at \$93.50 eight-frame extractor outfit as above, but containing a one inch pump, instead of the ¾ in. pump listed above \$104.50 If wanted without pump, deduct \$18.00 for ¾ in. pump and \$22.00 for 1 in. pump.

These prices are for the very latest Friction driven machines. If you should order an engine without the extractor, kindly say whether the gear of your extractor is 1 to 1 or 2 to 1 then we will order the suitable pulley.

The above prices are List, from which a considerable discount is made to subscribers.

THE BEEKEEPERS' REVIEW
Northstar, Michigan

W. H. LAWS' ITALIAN QUEENS

There are no better bees than Laws' Italians. Twenty-seven years careful breeding. My bees have taken premiums in my own and others' hands in many of the states of the Union. A single firm having bought over 6000 queens from me in past seven years say, "Your queens are very satisfactory." A queen-breeder who is using my breeding-queens says he could well afford to have paid \$25.00 each for such queens ten years ago. Untested queens, 90c; 12 for \$9.00; 100 for \$70.00. Tested queens, \$1.00; 12 for \$10.00; 100 for \$85.00. Select tested, \$2.00; 12 for \$18.00; 50 for \$50.00. Breeding queens, a large number of as fine queens, tried and tested, as breeders, each, \$5.00; six for \$25.00. Prompt attention to all correspondence.

W. H. LAWS, BEEVILLE, BEE COUNTY TEXAS

Fill Out this Crop Report Blank at Once

All subscribers to the REVIEW are asked to fill out and send in this report. It will be the only way that we can give you definite facts concerning the honey crop, and thus arm you with the information you must have to be able to intelligently set a price upon your honey crop this year.

Name.....

STATE County

Number of colonies did you begin the season of 1913 with:.....

1914 with?; 1915 with

Number of pounds of comb honey did you produce in 1913?.....

In 1914? In 1915?

Approximately how many pounds of comb honey was produced in your immediate locality

during 1913? during 1914?

during 1915?

Approximately how many pounds of extracted honey was produced in your immediate local-

ity during the season of 1913.....; during 1914?

during 1915?

From what source is your 1915 crop gathered?.....

What per cent do you ship to a distant market?.....

How is your honey put up for market?

If the friends will co-operate with us, send in the above information as soon as the season is over, we will then be in shape to decide on a price comparative to the last two seasons, and thus will not be in the dark about the proper price to ask for our hard-earned product.

Kindly do not fail to compare this year's crop with that of the two previous seasons, for if you should your report would lose half its value.

—ADDRESS—

THE BEEKEEPERS' REVIEW

Northstar, Michigan

Honey! Honey! Honey!

Producers having more honey than their home market will consume, can have their crop listed in the Review without expense, by following the following instructions and filling in the following space left blank for the purpose.

The Conditions Are, that you are to report immediately to this office as soon as your crop is disposed of so we will be able to keep the list a live one. Also you **MUST** agree to answer **ALL** inquiries regarding your crop, that may be asked you by intending purchasers. We will again follow the same plan as a year ago that proved so popular and profitable to those subscribers who had more honey than their home trade could use, by giving the address of the one having the honey for sale, also the kind of honey each one has for sale, leaving each one to do their own selling. The scheme is, to bring the producer and customer together, without expense to either.

In filling in the following blanks, if you will in mentioning the kind of honey you have for sale, say whether it is Comb or extracted, by adding the letter "C" if comb and the letter "E" if extracted, we will try and incorporate that feature this year, which ought to be appreciated by the buying public.

Kind of honey for sale.....
.....

Name Address
Write very plainly.

Honey Buyers! Honey Buyers!

Producers who have sold out their crop and need more honey to supply their increasing trade can be listed free of charge by applying at this office. It is the desire of the Review to bring producer and dealer close together cutting out all middle men whose only desire is to squeeze a little out of both the producer and the actual salesman, and we hope this scheme will be effective.

If you want to buy honey, kindly fill in the following blank, mail to this office and we will consider the matter of listing you as a buyer.

Name Address
Write it very plainly.

..... Address

TRADE

The REVIEW is now buying all kinds of beekeepers' supplies for the subscribers. We get wholesale prices on all supplies, returning nearly all the difference between the list price and wholesale price to the subscriber ordering. It is the desire of the REVIEW to make only enough out of the supplies bought for the subscriber to pay postage and the cost of advertising. This scheme is so liberal that ALL ought to take advantage of this buying privilege.

Never before in the history of beekeeping have the masses had the privilege of buying their supplies at near wholesale prices, and a person is very short sighted to pay the LONG CATALOG PRICE for his supplies when this privilege of buying at the lower price is open.

Have you got into such a "rut," that you MUST order your goods through the OLD HIGH PRICED channel or are you progressive enough to break away from the "Ties that bind" and come over into the new and better way of buying, i. e. that of buying collectively. Some one has said that it would "take one hundred years to educate the people to the importance of buying collectively.", About ten percent of beekeepers are NOW educated up to this standard and are taking advantage of this grand privilege, and this appeal is to the other ninety per cent who seem not to be able to comprehend that there is a possibility to make their dollars go further than through the OLD, OUT OF DATE way of buying individually.

The dealers will "tickle" when they hear you say, "I'm from Missouri, I have to be shown" for they know the one uttering these sentences is so far behind the times that he will live in the "old rut," to the benefit of the dealer and finally drop out, without ever receiving a single benefit from cooperation. DO NOT BE THE ONE TO STAND BACK TO BE SHOWN, but some to the front and be one that will say "We will show them," and take the word of your old friend Townsend, that we will win, AND IN LESS THAN A HUNDRED YEARS, too.

We hope to add another 10 per cent to the already well pleased 10 per cent that are now buying through the REVIEW, before the end of the year, will you be one of them to save a few dollars by this collective buying!

Subscriber W. W. Martin, Lander, Wyoming bought a "NATIONAL" engine last year and was so well pleased with it that he bought another this year JUST LIKE THE FIRST. He is well pleased, for he saved \$8.00 on the two engines by buying through the REVIEW. We could go on and fill this number of the REVIEW with similar instances of well pleased REVIEW customers who have saved all the way from a dollar to \$30.00 on single deals they have bought through the REVIEW, but space forbids mentioning others at this time. You may think you are getting a very close price through the dealer you have been buying of along back, but all we ask is for you to send us the same money you have been paying in the past, you saying of whom you bought, we will take the money and buy at the very closest price possible, returning you the difference, if any. Do not write us asking for prices, as we have none, but just make out your order as usual, inclosing the usual amount of exchange, say whose goods you want and we will do the rest.

A trial order will convince you. Hereafter, address all orders for beekeepers' supplies of every sort to

THE BEEKEEPERS' REVIEW NORTHSTAR, MICHIGAN

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, furnished at 30c. per thousand and postpaid. Advertise Honey, Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to

PEARL CARD CO., Dept. A5,
Clintonville, Conn.

National Membership Dues

Now \$2.00

What this two dollars gets!

One year's subscription to the official organ—The Beekeepers' Review. \$1.00.

Dues in both National and your Affiliated Association. \$1.00.

Mail \$2, no more or no less, to Sec. Wesley Foster, Boulder, Colo., or to your local secretary, or, if more convenient, to this office.

It's a Long Way to Tipperary

But it's a short way to success if your colonies are headed with queens from THE J. E. MARCHANT BEE AND HONEY CO.

Breeders of the highest grade of Island Bred Italian Queens.

Pure mating guaranteed. Prices as following:

	1	6	12		1	6	12	
Untested Queens	\$1.50	\$ 7.50	\$12.00	½ lb. Bees	.....\$1.50	\$ 7.50	\$12.00	
Tested Queens.....	2.00	10.50	18.00	1 lb Bees	.....	2.00	10.50	18.00
Sel Tested	.....	3.00	15.00	2 lbs. Bees	.....	3.00	15.00	27.50
Breeders	\$5.00 and \$10.00			3 lbs. Bees	.....	4.00	21.00	36.00
Ext. Sel Breeders	\$25.00			5 lbs. Bees	.....	5.50	27.50	50 00
				These prices are without queens.				

We will ship from Canton, Ohio, after June 1st.

We guarantee safe delivery, and a square deal. WATCH US GROW.

**The J. E. Marchant Bee and Honey
COMPANY**
APALACHICOLA, FLORIDA

BUY YOUR QUEENS

from the man who guarantees every one to be purely mated or your queen replaced.

	Before July 1st			After July 1st		
	1	6	12	1	6	12
Untested	\$1.00	\$5.00	\$9.00	\$.75	\$4.00	\$7.00
Select Untested	1.25	6.00	11.00	1.00	5.00	9.00
Tested	1.50	8.00	15.00	1.25	6.00	11.00
Select Tested..	2.00	10.00	18.00	1.50	8.00	15.00
Breeders	5.00			4.00		
1. Comb Nuclei	1.50	8.50				
2. Comb Nuclei	2.50	13.00				

Your choice of either Golden or Leather Colored queens by return mail. Above prices on Nuclei do not include queen. You are to select such queen as you wish with the bees and add the price.

L. MORRISON
2200 E. 2nd St. Argenta, Ark.

"falcon"**Bee Supplies**

**SHIPPING CASES, EXTRACTORS,
HIVES, ETC. EVERYTHING
FOR THE BEEKEEPER**

Send 'us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon" supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. Falconer Mfg. Co.

FALCONER, N. Y.

Where the Good Bee-Hives
Come From

**"The Pearce Method
of Beekeeping"**

The Pearce method of Beekeeping is now being revised and brought up to date. The first edition of 5000 copies have been some time out of stock and Mr. Pearce is now rewriting the entire work and bringing it up to the very minute. It will be the same size as the old volume, but contain many more pages. The new work will be ready for delivery by early spring. Price 50c post paid, or clubbed with a year's subscription to the Review for only \$1.10.

Address

The Beekeepers' Review
Northstar, Michigan

**SELL
YOUR QUEENS IN CANADA**

In the Province of Ontario alone there are 11,000 persons producing honey. A very conservative calculation means that there are 50,000 Queens. If you have Queens to sell the Canadian Beemen, say so in The Canadian Horticulturist and Beekeeper, the only bee publication in Canada. It is the official organ of the Ontario and New Brunswick Beekeepers' Associations.

Classified rate 3c per word—each single number and sign counting as one word. Cash in advance.

Specimen copy on request

The Canadian Horticulturist and Beekeeper
PETERBORO, CANADA

THE "BOOSTER"**A Popular Paper at a Popular Price**

Devoted to the selling end of the honey business. Will give the best and latest methods of selling honey. Just the thing to increase your sales and profits. "Every number is a good number." You should not miss one. 25c for a whole year's subscription, Clubs of 5—\$1.00.

The "BOOSTER"
REDKEY, INDIANA

GRAY CAUCASIANS

Their superior qualities are early breeding; great honey gatherers; comb honey cappings being beautifully white; very prolific; very gentle; great comb builders; not much inclined to swarm; give better body to their honey; not much inclined to rob; very hardy; never furious, good winterers everywhere; the best all-purpose bee. Send a trial order for a queen or nuclei and be convinced. Prices on application.

J. J. WILDER, Cordele, Ga.

The Pearce Method of Beekeeping

I am rewriting, revising and enlarging the Pearce Method of Beekeeping. It was my intention to have it put out by the first of March, but owing to a spell of sickness it was delayed, but will be out on or before the first of May. Order now! The price, 50c, will be the same as the first edition.

ADDRESS **J. A. PEARCE, Route 1, Grand Rapids, Mich.**

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
1/2 gallon can, including mailing case, per crate of 100.....	9.50
1/4 gallon can, including mailing case, per crate of 100.....	7.50
1/2 gallon square round cornered syrup cans, 1 3/4 in. screw cap, per crate of 100.....	5.50
1/4 gallon square round cornered syrup cans, 1 3/8 in. screw cap, per crate of 100.....	4.00

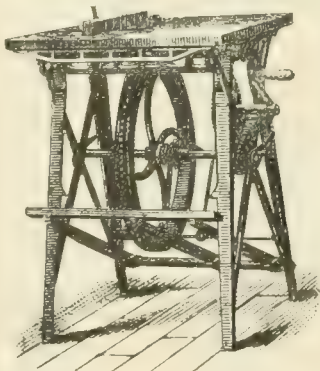
We cannot furnish less than a full crate of the above at any price.

If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

Address all orders to the

BEEKEEPERS' REVIEW
Northstar, Michigan



MAKE YOUR OWN HIVES

Beekeepers will save money using our Foot Power

SAWS

in making their hives, sections and boxes. Machine on trial. SEND FOR OUR CATALOGUE

W. F. & JNO. BARNES CO.

84 RUBY STREET

ROCKFORD, ILLINOIS

NOTICE TO QUEEN BREEDERS

If you want to sell Queens and Bees, advertise in the AMERICAN BEE JOURNAL. Read what some of our advertisers have to say about the pulling power of our advertising pages:

Got good results from the advertisement I ran in last season's Journals.

D. G. LITTLE, Hartley, Iowa.

We have advertised in the American Bee Journal for thirty years. Have always found it a good advertising medium.

J. W. K. SHAW CO., Loreauville, La.

My advertisement brought all the Orders I wished for. In fact, more than I was able to supply. Quite a number of orders had to be returned.

J. A. SIMMONS, Sabinal, Texas.

The American Bee Journal is a good medium for advertisements. We have had all the Orders booked we could fill.

GOLDEN RULE BEE CO., Rialto, Calif.

The Reasons are self evident—a good bee paper is taken by live and wide awake beekeepers and these are the kind that are always in the market for good bees and good queens.

Rates on space are not high. Display at 15 cents a line or \$2.10 per inch. Classified 15 cents a line.

Send in your order with copy today and get rid of your surplus queens.

AMERICAN BEE JOURNAL
HAMILTON, ILLINOIS

Have Your Old Combs

CAPPINGS OR SLUMGUM

Rendered by our

High Pressure Steam Wax Presses

Dadant & Sons,
Hamilton, Ill.

Dear Sirs:

I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Out outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

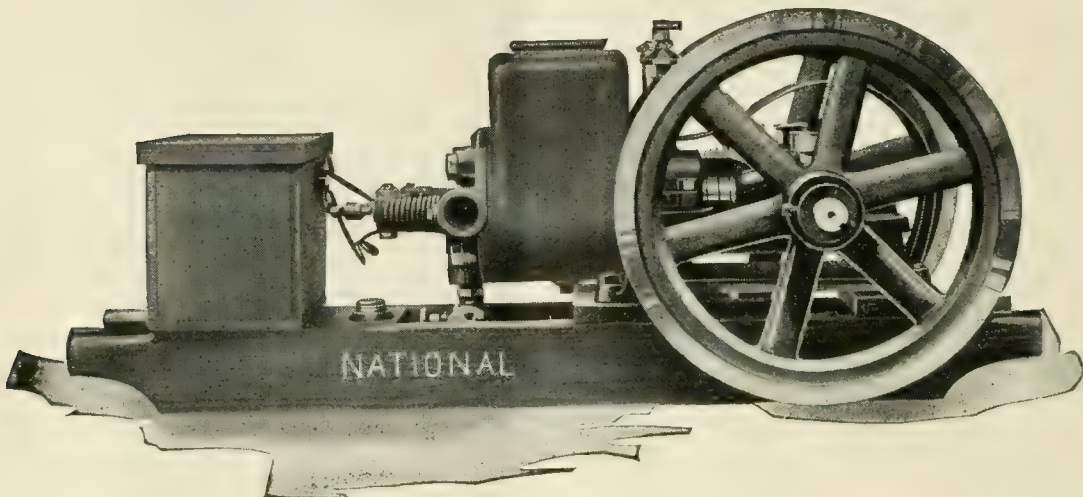
DADANT'S FOUNDATION

Just Now We Offer Attractive Terms on Best Quality
BEE SUPPLIES—Send a list of what you need

DADANT & SONS

Hamilton, Illinois

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard rollers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1½; bore, 3¾; stroke, 4½; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1¼; floor space, 9x36; shipping weight 200.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to The Beekeepers' Review, Northstar, Michigan.

Tin Containers for Honey from New Orleans, La.

We have made arrangements so we can ship Tin containers for honey from New Orleans, La. to supply our Southern and West Indies trade: we quote as follows:

Friction Top Pails and Cans			
Approx. Capacity	Per 100 In 50 Lots	Per 100 In 100 Lots	Per 1000 In 1000 Lots
3 lb. Cans		\$3.15	\$29.50
5 lb. Pails	\$5.25	5.00	45.00
10 lb. Pails	7.35	6.85	63.00
5 Gallon Square Honey Cans, 1¾ in. Screw			
50 in one large crate, per crate			\$11.00
1 in a case, peice, per case			33½
2 in case, partition, price per case			63
5 Gallon Cans With 8 in. Screw Caps			
1 in a case, per case			40
2 in a case, with partition, per case			73½

Texas customers furnished from Detroit. Mich

THE BEEKEEPERS' REVIEW, Northstar, Michigan

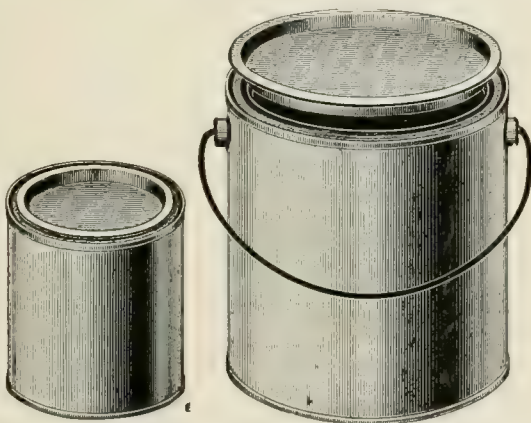
Canco Honey Cans and Pails



PATENTED

Parcel Post Honey Package, oblong can with slotted screw, record seal and rubber gasket. Individual corrugated cartons. 6 lb. and 12 lb. sizes only.

Spencer Friction Top Cans and Pails

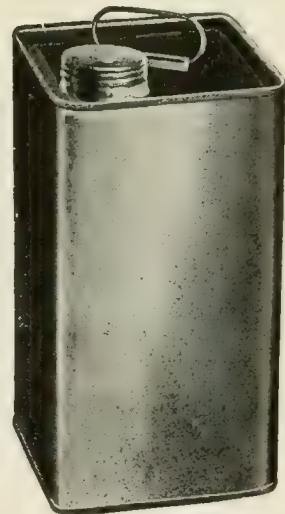


PATENTED

In sizes holding approximately 2 lbs., 2½ lbs., 3 lbs., 5 and 10 lbs.

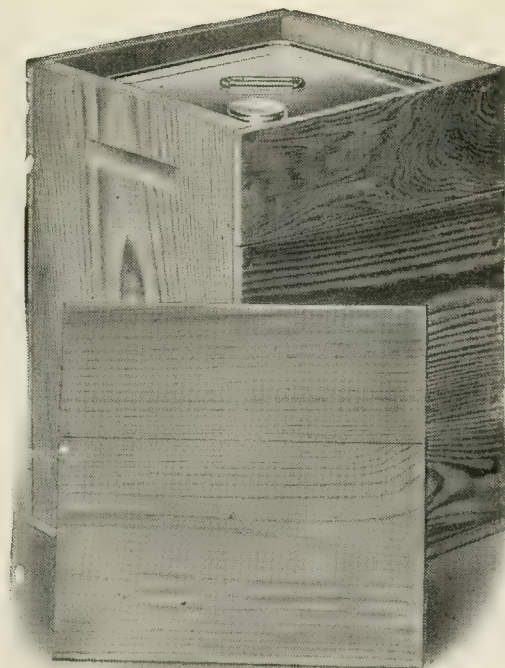
Write for prices.

PATENTED



1 GALLON SQUARE

ROUND
SQUARE
CRATED
or
BOXED

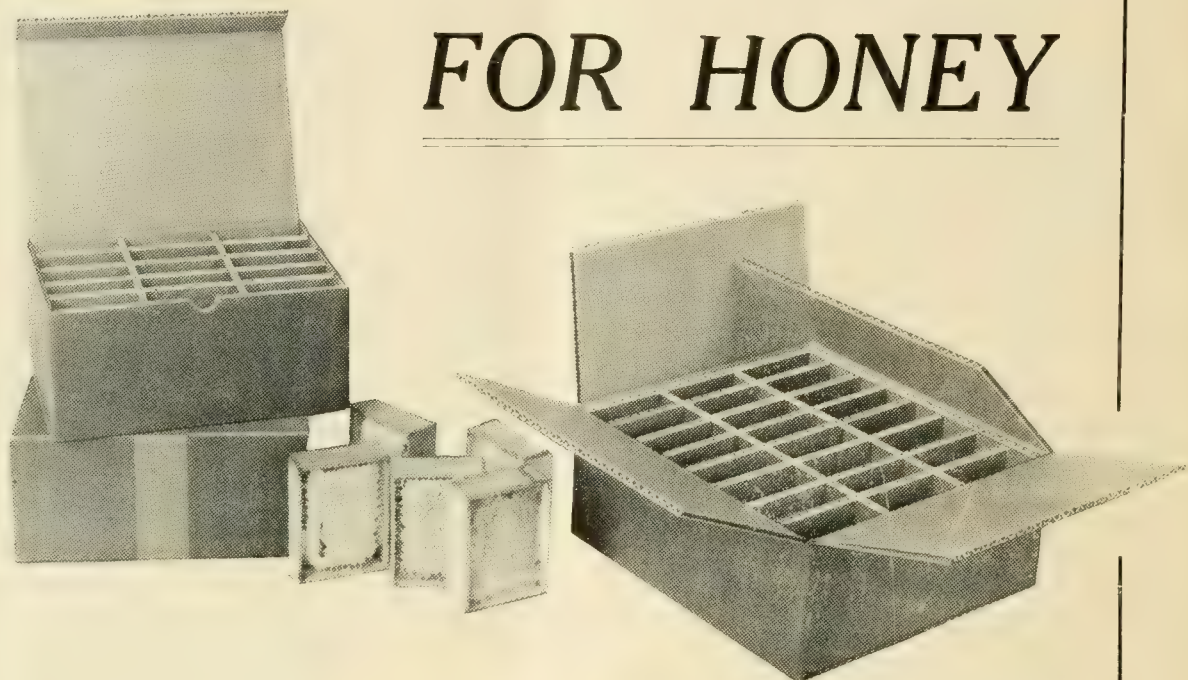


60 Pound Square
One and two in case.

American Can Co.

New York Chicago
147 West 14th St. Monroe Bldg.

FOR HONEY

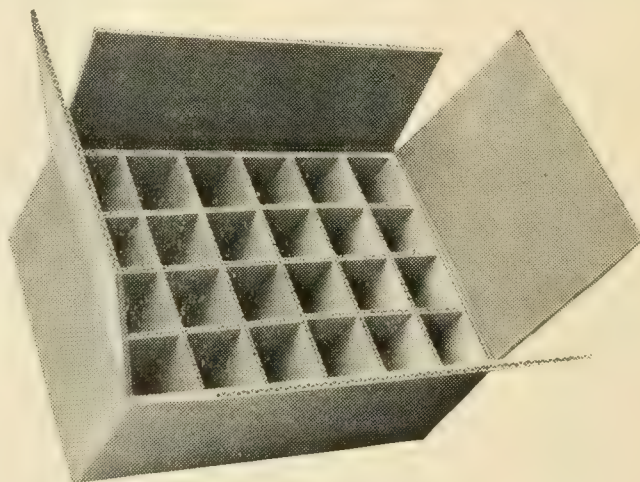


H. & D. Corrugated Fibre Boxes

Are used and highly recommended by the most progressive shippers. Their strength and lightness are wonderful. Shipped folded flat.

They are—

Economical
Convenient
Compact
Damp-proof
Dirt-proof
Secure against
Pilfering



Write for Illustrated Catalog and Manual
"HOW TO PACK IT"

The Hinde & Dauch Paper Company

Canadian Trade
Address Toronto, Ont.

420 Water Street, Sandusky,
Ohio

TIN CONTAINERS FOR HONEY



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity		Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2	lb. Can	.....	\$2.25	\$2.15	\$20.00
2½	lb. Can	.....	2.75	2.60	24.00
3	lb. Can	.....	3.00	2.85	28.00
5	lb. Pail	.....	\$5	4.75	4.50
10	lb. Pail	.....	7	6.50	6.25
					60.00

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans	.....	.71 per case
12 pails in a case, 5 lb. Pails	.....	.65 per case
12 pails in a case, 6 lb. Pails	.....	.70 per case
6 pails in a case, 10 lb. Pails	.....	.49 per case
6 pails in a case, 12 lb. Pails	.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price	.....	\$ .33 per case
2 in a case, price	.....	.60 per case
2 in a case in lots of 250 cases, price	.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price	.....	58.50 per 100 cases
50 in a crate, price	.....	\$10.50 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.		

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @	.....	.60c per case
10 in a wooden re-shipping case @	.....	.95c per case
50 in one large crate	.....	\$3.63 per crate
½ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	\$5.50
¼ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to National Members, cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

Address

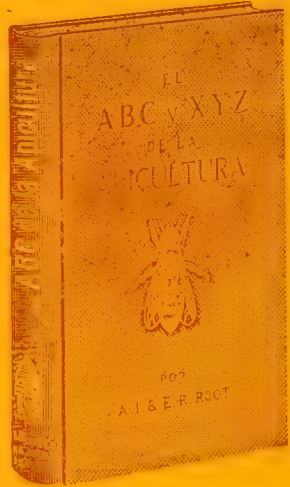
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



The Authoritative Manual on
Apiculture

The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



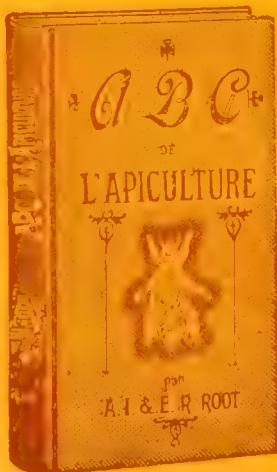
The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good textbook on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



Order direct of the Publishers
or from Dealers

The A. I. ROOT COMPANY

MEDINA, OHIO, U.S.A.



The Bee-Keepers' Review

Published Monthly

AUG.

1915



NORTHSTAR,
MICHIGAN



ONE DOLLAR PER YEAR

Start the Season Right

by using

DITTMER FOUNDATION

The bees like it for it's made to just suit them and is just like the Natural Comb they make themselves.

Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

All other Supplies in Stock

Gus Dittmer Company
AUGUSTA, WIS.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping: **DIRECT, QUICK and LOW RATES.**

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping cases are dandies.

Ask for catalogue of Supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

PAGE-KENKEL MFG. CO.

MANUFACTURERS

of the

"NONE BETTER"

**Beekeepers'
Supplies**

Perfect sections from young, white basswood, White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

Guarantee:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

Page-Kenkel Mfg. Co.
New London, Wis.

'Our Very Best is THE Very Best' BEE SUPPLIES

BEST SECTIONS.

BEST SHIPPING CASES.

BEST OF ALL SUPPLIES.

BEST PRICES you will get for your honey when put up in our sections and shipping cases.

"LOTZ" sections and shipping cases have stood the test. **WHY?** Because they are perfect in workmanship, quality and material. Buy Lotz goods when you want the best. Our 1915 catalogue ready January 15th, send your name and get one.

H. S. DUBY & SON

ST. ANNE, ILLINOIS

Carries a full line of our goods

AUG. LOTZ CO.
BOYD, WIS.

Safety First

We wish to announce that we are breeding exclusively from two QUEENS that gave 300 pounds per colony in a 24 day honey flow in 1914 in the wonderful Tupelo region in Florida. The QUEENS we are putting on the market we know there's no equal for honey production. NOW is the time to requeen your yards with this strain and be in shape for the season next year. OUR QUEENS ARE WORTH MORE THAN WHAT WE PRICE THEM BUT we are anxious to place this stock on the market. With our years' experience we have never seen such HONEY producing stock. Don't think you won't get daughters from this stock for we are breeding exclusively from these two queens. Our DRONES are selected from our CHOICEST colonies and placed in our queen yard. THESE QUEENS are very beautiful in color, very gentle, and for HONEY production there is no equal. You will be safe to place your order for this strain. We can take care of any size orders. PURE MATING, PROMPT DELIVERY, AND SATISFACTION GUARANTEED. EXPORT ORDERS CAREFULLY PACKED.

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Untested	\$1.00	\$ 5.00	\$ 9.00	1-Frame Nuclei with queen.....\$2.50
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Sel. Tested	2.00	9.00	15.00	3-Frame Nuclei with queen..... 4.50
One year old breeders from these				5-Frame Nuclei with queen..... 5.50
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NOT ONE BAD IN THIRTY THOUSAND

One of our customers tells us that he has put up (folded) thirty thousand Lewis Sections in a season, and not found one section in the whole lot that was not perfect.

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CAN YOU SAY THE SAME OF EVEN FIVE HUNDRED OF ANY
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Lewis sections are made of Wisconsin Basswood—the best material known for sections. The stock used is first carefully selected by the lumber people—then when it reaches the Lewis factory it is again sorted by the Lewis Inspector, leaving only the whitest material to go into Lewis Sections.

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Look for the Beware Brand

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The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION INC.
AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo.

PROF. EDWIN G. BALDWIN, Deland, Fla.

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Advertising rates on application.

Forms close 20th of each month.

VOL. XXVIII NORTHSTAR, MICHIGAN, AUGUST 1, NO. 8

The Price to Ask for the 1915 Crop of Honey

In deciding upon a price to ask for our 1915 crop of clover extracted honey at wholesale, we have not advanced the price to speak of from last year, but it will be held very firm, and the prices not guaranteed for any considerable time ahead. Our schedule of prices is as follows: One single 60 pound net can at \$6.25, one to nine cases, inclusive, two 60 pound cans to the case at 10 cents per pound, ten or more cases at 9 1-2 cents per pound. The above prices are on car at our station, and we reserve the right to withdraw the 9 1-2 cent quotation at any time. Any one having a good stock of white table honey need not accept less than the above prices this season, for it will surely go at the above price if asked and held for it. Good table honey, both comb and extracted will be scarce this season. Baker stock of extracted honey will not be at a brisk price this fall, and if we had some and were offered a fair price we would not hold it. We predict a much better demand for honey this fall than last, for the financial condition of the country is much better, which cuts a good figure in the honey market.

School for Beekeepers in Massachusetts

The Essex County Agricultural School is a secondary agricultural institution and one of several newly established in the state. Particular emphasis is to be paid to the teaching and promotion of beekeeping. It is their initial step to procure the itinerant instruction from the Agricultural college staff for this instructional work, which is selected in part from the college and part elsewhere. Mr. Geo. W. Adams is a prominent beekeeper of Essex county, having had a considerable apiary for years. Mr. S. L. Davenport is an instructor of the Essex County Agricultural school and has charge of the beekeeping work there. Mr. Fred A. Smith is director of that school, a man well versed in beekeeping. Mr. Gladstone H. Cale is a deputy apiary inspector in Massachusetts.

Dr. Burton N. Gates, Department of Entomology, Amherst, takes a prominent part in the demonstration work as will be noticed by turning to page 304 of this number of the Review where a complete program is published. For detail of arrangement, accommodations etc., all inquiries should be addressed to Mr. Fred A. Smith, Director, Essex County Agricultural School, Hathorne, Mass. Application for registration in this school should also be addressed to him.

The Crop Condition to Date

As we go to press but few reports have been received relative to the surplus honey crop of 1915. It is our experience that when the crop is good, many will report, but on the other hand, few like to report a crop failure. From what reports are now in we draw the following conclusions: Texas has about the same crop as two years ago, and about one third as much honey as a year ago. We have some good reports from sweet clover locations in Louisiana and Alabama, where one hundred pounds per colony of extracted honey has been secured. Other reports from the south would indicate only a fair crop on the average, with some complete failures which is usual. Further north, in the lower part of the clover belt, but small crops have been secured, for the clover was in bloom during the bad weather of the latter part of May and the forepart of June. In the extreme northern states and Canada, likely a half crop of clover surplus has been harvested. Reports say that the first two cuttings of Alfalfa have been practically lost to the honey producer, on account of too cold weather for bees to work during its bloom. The third cutting of alfalfa will soon be on, and producers will still get

some honey, providing we have a change in weather. The Review hopes the weather conditions will be good during this third alfalfa cutting, so honey producers will get a third of a crop at least. California reports are vague, but it is presumed they will have considerable honey for eastern shipment again this year. As a whole, the crop will likely be considerably below normal.

Florida Palmetto and Mangrove

Under date of June 30th, we report the following for the saw-palmetto yield in Florida this season.

For the southwest coast, the bloom was blighted badly, from too much rain. In the neighborhood of New Smyrna and in general down the east coast the yield from Saw palmetto was only about one-third a normal crop.

Mangrove is just coming into bloom, but bees are not yet touching it. There is no great prospect of a good Mangrove yield yet. Sometimes a week, however, will change conditions altogether. After Mangrove the Cabbage palmetto is the only source of honey yet available. Fuller reports later.—E. G. B.

A Peculiar Season

1915 will go on record as a peculiar season. Bees wintered well, followed with extra fine weather during March and April. This fine spring weather, coupled with good wintering, brought the bees up to a stage where they were in shape to take care of the main clover flow early in May. Thus far every thing promised well for the bees to be in good shape for our main flow which usually begins during early June. With May, we began to have weather that could not have been worse, had it been ordered that way. This very cold unfavorable weather continued until the nineteenth of June, since which time we have had weather so the bees could take advantage of the honey flow about half of the time. When the flow began from clover, or, rather, when the bees could take some advantage of it, the nineteenth of June, colonies had actually reduced in numbers, since, say the tenth of May. In a normal season, our bees are considerably reduced in numbers at the close of our main honey flow, but this year those April and early May hatched bees were actually aged at the opening of the flow, consequently, the force dwindled very rapidly when actual work began, so we did not have the large force of workers we should have had, had breeding continued during the seven weeks preceding the clover flow.

A Late Season

The cold May and forepart of June held the clover back, so haying was two weeks later than normal, and even at this late date, July 21st, is still producing some honey. After all, we will secure some more than a half crop. Bees have done well any days during the clover flow when the weather would permit their working.

JOHN LEFLER, Menton, Calif.

The record of 161½ lbs. in one day from one colony, that I referred to some time ago, was made in April, 1909 by a hive in my Live Oak apiary. That same hive made 140 lbs. of orange honey for that season, but the average for the yard was much less, about one-half that in fact. The hive which made the 24 lbs. record was in another apiary much closer to the oranges. My apiary is about one and one-half miles from them. I have not made a practice of keeping hives upon scales since then, but expect to try it again next season, many of my colonies this season gave me 3 full 10 frame supers and a few gave 4 of orange honey, but the average was about 2 supers.

Now about our different soils. The Mentone Crafton Redlands, Redlands Junction and Brawn Mawr Loina Linda orange district, commonly called the Redlands district, because Redlands is the geographical center and principal town and shipping point, occupy the southeast corner and part of south side of the Sante Anna valley, which runs from Mt. San Bernardino in a southwest by westerly direction for about twenty miles and is here at Redlands about eight miles wide, the Sante Anna river runs westerly about through the center of the valley. This end of the valley is bounded on the south by a range of low hills with an easy slope northward to the river and from Crafton to Loina Linda about eight miles and from the top of the hills to the river it is set practically solid to oranges. The soil back from the river is sandy and gravelly while that of the hills is a heavy red clay. In normal seasons the trees next to the river will begin blooming first, commonly the latter part of March, followed by the trees upon heavier soil. By the middle of April the navels are in full bloom and the honey flow from the oranges is at its height. The navels are followed by the valencias and seedling with the Mediterranean Sweets bringing up the rear. These blooms of course all over-lap. The length of blooming time is governed somewhat by the weather in March, if the month is cool and rainy the buds will develop more slowly and

the blooming period will be longer. If however we have a week or ten days of unusual warm weather in March, as we had this season, the buds will develop so rapidly that the blooming season is much shortened, normally the bloom lasts to the 15th of May, or rarely to the 1st of June, as it did in 1909. This year, however, (1914) the bloom was practically all over by May 1st.

(We are much surprised to note how much later the Orange bloom is, in California than in Florida. Here it is from end of February to first week in April. It is seldom that it lasts for any length of time in April. We must have warmer weather early in the season, or, possibly, our sandy soils are "quicker." E. G. B.)

General Correspondence

Size of Broodnest for the Southern States--The Importance of Requeening

D. STAD MENHALL, On the Mississippi

Editor Review:

In the December, 1914 Review, page 462, Mr. G. F. Pease says in forming his conclusions on "Keeping Bees in the South," "Put comb honey supers above double 10 frame brood nest on account of the need of so much brood room and to stop swarming." I agree with him in regard to plenty of brood room although I prefer a large brood chamber to begin with, holding 16 to 18 frames, (these frames are not the Langstroth size) instead of two brood chambers as it saves a great deal of work during and after the surplus season. But, so far as preventing swarms, with all due respect to Mr. Pease, allow me to suggest that he has only gone half way, only, so to speak.

Requeen all comb honey colonies as early as possible—say, not later than May 15th, in the Cotton Belt—taking extra pains to have early drones for this purpose. All colonies so requeened practically, will not swarm that year, south of the Cotton Belt and not more than five to ten per cent in the Cotton Belt and these will swarm in August, after most of the white honey flow is over, in majority of locations. I think (and this is almost a positive conclusion) that the reason the five to ten per cent will swarm, is because at the time of requeening a large majority of the field force

is composed of young bees—those that are just commencing field work.

One Gallon Glass Bottle for Honey

EDWARD HASSINGER, Jr., Greenville, Wis.

I have used a one gallon glass bottle with a handle on it for honey, there are two glass loops next to the mouth of the bottle a wood and wire handle is fastened to these loops, making a very convenient and an attractive package for honey, and the words "one gallon," are embossed on the bottle in glass. It is presumed that it would not be necessary to mark the net weight on the label if bottle was full.

I believe the time will come when all empty packages will be returned to the factories and the producers, in everything that is bought and sold, same as the milk man gets his bottles returned, egg cases and chicken crates are all returned to the shipper. These are necessary foods to sustain life, honey is not a necessity, therefore it is all the more necessary to have a return package. The friction top pails are a nuisance anyhow, they will rust, are hard to wash and dry properly, the groove around edge on top is a dust collector, and labels do not stick well on the tin, and last but not least as a return package they are a failure entirely.

These bottles are made of very heavy glass and I believe there will be little or no loss in breakage. I believe they should be just as practical for honey as the small glass bottles and tumblers that are used so much in the stores.

I can buy these bottles for 10c apiece in a retail way. For a home trade they are just the thing, the first bottle that you sell to a customer, charge ten cents more for the honey to pay for the bottle and see that you get it, on second order with empty bottle returned deduct ten cents from the price of the honey.

These bottles have a mouth or opening of about an inch. This is not enough for cold honey, as it is almost impossible to get the honey into the bottle, but is all right for warm honey. It is presumed that it is just as difficult, to get the honey out, unless it is kept in a warm place all the time. With a handful of lead shot these bottles can be washed out more readily than a tin pail, and after once used for honey they need not be washed again.

These bottles must be made with at least a one and one-half inch opening and a patent brass or glass cover with a clasp attach-

ment, also inner cover of cork or rubber. I want to suggest that every reader of this article send a post card addressed to the REVIEW saying how many gallon bottles you would buy to try them out. I will place my order for 100 right here. We must get an order large enough to enable the manufacturer to make a special bottle for the beekeeping fraternity, to be used for honey,

(Concluded on page 301)

Beekeepers' Review,
Northstar, Mich.

Dear Editor:—

I noticed in last edition that suggestions were in order for the betterment of the Review as the beekeepers' own paper. Like you I realize that its usefulness is too limited and should be more general as a beekeeper's medium. At present it does not offer enough in the way of practical aid for me to have a clear, good proposition to put before the beekeepers of my section.

I have a suggestion to offer that might enable me to do this more fully and if it would work in my case maybe it would in many others. My suggestion is this:

In every state have a wide awake, active agent in the person of a progressive beekeeper. If such a party could not be found at once one could be sought out and appointed later. It would be his duty to work his territory or state and become as familiar as possible with every beekeeper and go after him with this good proposition. "The Beekeepers' Review is the Beekeepers' own paper published by us and for our interest. It contains a department for our own state full of the best home suggestions and ideas about bee culture gathered up here and there over the counties and you are requested to take part in it. Not only would we help each other right here at home with the best ideas in beekeeping but would help each other in purchasing supplies at greatly reduced prices, also we could advertise your honey for sale and help you in every way possible as fellow beekeepers. The membership fee is only \$2.00 which you may send along with your full address."

I can reach them with a proposition similar to the above and do a great work among those of my craft in the way of organizing this association here at home. This is only a personal suggestion and it may be all wrong when it comes to framing up an organization that would cover this ground.

Yours truly,

J. J. WILDER.

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If you are a paid-in-advance member of one of the above associations, you are a member of the National Beekeepers' Association in good standing until the end of this fiscal year without additional expense. If you are NOT a member of one of the above associations, you should be. Send \$2.00 to Secretary Wesley Foster, Boulder, Colorado, which will pay for the Beekeepers' Review and your National and local dues for a year. Do it today, waiting is dangerous! If more convenient, the order can come to this office.

Minutes of National Beekeepers' Association--Denver

GEORGE NICHOLS, Montrose, Colorado, Assistant Secretary

(Continued from page 224, June Review)

Supplementary Report of the Credentials Committee

We, your committee on Credentials of The National Beekeepers' Association, do hereby certify in this our supplementary report, that we have examined all the credentials of delegates thus far presented to us, and we find, in the absence of official lists of membership and the difficult means at hand in determining membership, that the following delegates are entitled to seats and the number of votes set opposite their names:

STATE	DELEGATE	VOTE
Tennessee	George W. Williams, seated,	3
Iowa	Frank C. Pellett	3
Washington	Wesley Foster	2
Montana	Tercy Kolb	1
Indiana	J. C. Bull	3
New Mexico	Wesley Foster	1
Idaho	J. H. Stoneman	4
C. N. Western	J. C. Bull	1
N. Michigan	F. E. Millen	1
Kansas	Dr. Bohrer	1
Michigan	F. E. Millen	2
Illinois	E. J. Baxter	5
New Jersey	Dr. E. F. Phillips	2
H. H. & F.	Dr. B. N. Gates	1
Worcester	Dr. B. N. Gates	2
Ad. New York	Dr. B. N. Gates	2
Vintor, Utah	D. H. Hillman	1
Missouri	M. E. Darby	2
Idaho and Oregon	W. L. Porter	1
Minnesota	Francis Jager	3
Wisconsin	Lathrop	1
Colorado	D. C. Polhemus	2
	E. J. BAXTER,	
	FRANK C. PELLETT,	
	F. E. MILLEN,	
	Committee.	

Report of Committee on Local Arrangements

We, your committee on Local Arrangements, wish to report that through the courtesy of the Convention League, the Tramway Auditorium was secured for the public sessions of the Convention for the sum of \$60.00. Forty dollars of the amount being contributed by the Convention League and twenty dollars by the Entertainment Fund of the Local Committee.

The Colorado Honey Producers' Association has very generously provided the banquet entailing an expense exceeding \$75.00.

The Colorado Honey Producers' Association, The C. S. Morey Mercantile Company, The G. B. Lewis Company, Dadant & Sons and the American Can Company have assured the success of the exhibit features.

Your Local Committee is indebted to Mr. L. F. Jouno, Mr. Walter Jouno, Mr. Fred Wick and Mr. Herman Rauchfuss for the complimentary use of their automobiles to bring visitors from the Union station to the Convention headquarters.

The Local Committee raised the amount of \$85.95 as an entertainment fund from twenty-eight contributors.

EXPENSE

Programs, \$8.75; Phone, 20 cents; Advertising, \$12.00; Music, \$10.00; Refreshments, \$13.50; Signs, \$8.50; Traveling expenses, \$6.00; Rent of table, \$1.50; Custodian, \$5.50; Rent of Tramway auditorium, \$20.00. Total \$85.95.

Signed,
WESLEY FOSTER, Chairman,
N. L. HENTHORNE,
L. F. JOUNO.

Report of Auditing Committee

We, the Auditing Committee, having gone over the accounts as given us, find an error of one (\$1.00) dollar in the itemized disbursements. The total disbursements are shown to be \$2,788.86 whereas, we find it to be \$2,789.86.

This leaves a balance in the treasury of \$17.63 instead of \$18.63 as given in the Secretary-Treasurer's report.

J. H. STONEMAN,
JOHN C. BULL,
WESLEY FOSTER,
Committee.

Resolutions

The National Beekeepers' Convention assembled in National convention in Denver, for the purpose of advancing the interests of the bee culture industry, consider it is its pleasure and duty to adopt the following resolutions:

OLD MEMBERS

We thank the old members of the National Beekeepers' Association for coming long distances to attend this meeting, thus bringing the memories of the past abreast the problems of the present. We thank those old members for the inspiration which we hope may always animate the N. B. K. A.

COLORADO B. K. A.

Whereas, The Colorado Beekeepers' Association, through chair

committees, have provided the National Beekeepers' Association delegates with all our facilities to easily and comfortably transact their business, and have made our convention a most enjoyable one, we hereby express our thanks and appreciation for their efforts.

COLORADO H. P. A.

The National Beekeepers' Association extends its thanks to the Colorado H. P. A. for the cordial welcome and treatment of the delegates during their stay, and the splendid banquet tendered them, and many other efforts which made our stay a most pleasant and enjoyable one.

VOTE OF THANKS

We vote a vote of thanks to Mr. Geo. Nichols, who has been kind enough to act as temporary secretary for this convention.

RESOLVED, That the thanks of this Association be extended to Mr. Burke Vancil, Attorney, Springfield, Ills., as an appreciation for his personal interest in the welfare of the National Beekeepers' Association, and in its incorporation.

BEEKEEPING IN SCHOOLS

WHEREAS, We with pleasure observe that several states in the last few years have recognized the bee industry as one of great future possibilities, by establishing chairs of Bee Culture in connection with their Universities, providing ample and free instruction in Bee Culture, the National Beekeepers' Convention hereby expresses its thanks to those Universities and their officers for such aid and recognition. It expresses its hope at the same time, and pledges its support to an effort to have Bee Culture recognized and taught in all State Universities and Agricultural Schools of the country.

U. S. CENSUS

WHEREAS, The next United States census approaches, the National Beekeepers' Convention, regretting the results of the 1910 census, whose figures do a great injustice to beekeepers by showing up as a small diminishing industry by failing to enumerate probably more than one-half of all the beekeepers of the United States, take the necessary steps with the proper authorities of Washington to secure a just and accurate census of the bee industry. We recommend the appointment of an active committee to take up this matter.

FRUIT SPRAYING

WHEREAS, There exists misunderstanding and friction between the fruit-growers and beekeepers of the country regarding

the spraying of fruit trees, and poisoning of bees, the National Beekeepers' Convention desiring a better understanding with the fruit growers, proposes that the proper authorities of Washington take up the matter of spraying and formulate a national plan or policy of spraying, which will be acceptable to both the fruit-growers and beekeepers alike.

GRADING RULES

WHEREAS, A uniform grading of honey is necessary for the maintaining of the prices of honey, we suggest that more uniform grading rules be adopted.

FOUL BROOD

WHEREAS, The national menace to the beekeeper, the European and American foul brood, is assuming threatening proportions, we think it timely to suggest that this national scourge will eventually have to be confronted with a national campaign and plan of warfare toward its eradication, whether this plan be effected by the voluntary organization of all bee inspectors of different states, or by an organized effort of the Government.

EXTENSION

WHEREAS, The Extension Division of the Department of Agriculture in Washington is most anxious to spread light and knowledge of Agriculture to the remotest corners of the country, has through its Extension Division accomplished great results in other branches of Agriculture

We, the National Beekeepers' Association, respectfully ask that a fit, energetic and capable man be appointed on the Extension Division to visit all sections of the country to advise, instruct, demonstrate and organize the beekeepers of the United States, and work hand in hand with the various state and local organizations to bring the Bee Industry into national prominence and help it to realize its promising possibilities.

SUGAR

WHEREAS, With the rapidly growing industry of Bee Culture, feeding bees with sugar syrup to keep them from dying of starvation in winter has become a great problem with the infant industry of beekeeping, and

WHEREAS, The price of granulated sugar has become prohibitive, and

WHEREAS, We recognize our Government as a helper and aid to all struggling industries, we suggest that the Government be approached with a petition to pass a law to allow the National Bee-

keepers' Association to import denatured sugar for the use of its members, free of duty.

RESOLVED, That next year's annual meeting of the National Beekeepers' Association be held in some eastern city.

FRANCIS JAGER,
Chairman of Committee.

Straining and Clarifying Honey

H. H. ROOT, Medina, Ohio

Given at the National Beekeepers' Association Convention, Denver, Colorado, February, 1915

There has always been considerable discussion on the subject of straining and clarifying honey, and there probably will be for years to come, for this part of the work will ever be an exceedingly important detail in preparing liquid honey for the market.

During the last few seasons the gravity principle of straining, or rather clarifying honey has received much attention on the part of extensive honey producers, on account of its simplicity and freedom from vexatious delays necessitated by changing filled up cheesecloth strainers, washing cloths, etc. Briefly, the plan consists in the use of a relatively tall tank containing nothing by way of equipment except a suitable gate at the bottom and perhaps a float to break up the current of honey when it is poured in at the top, thus preventing an active circulation of the new honey with the rest of the honey in the can. The plan is to draw no honey from the bottom until the tank is nearly full. By being careful to prevent a rapid circulation of the honey in the can by means of a float the honey when drawn off at the bottom is found to be very clear and free from bits of cappings, combs, etc. In extremely hot weather and when the honey is comparatively thin, the gravity system alone leaves little to be desired, but in cool weather or in case of honey that is quite thick it is found that, in order to be clarified sufficiently the honey has to stand several days. This makes necessary a somewhat elaborate outfit of expensive cans in order that the work may not be hindered.

During the past season we used a combination of a straining cloth and settling tank which worked better than anything else we have ever used before. The only additional equipment necessary is an additional can without a bottom, the same height as the regular tank, or a little higher preferably, and smaller in diameter. (No exact ratio between the two diameters is necessary). Over the

lower end of the smaller can, we stretch cheesecloth and tie it firmly. When ready to begin extracting we set the smaller can into the large tank, letting the cheesecloth rest on the bottom of the main tank for the time being. The honey from the pump, or the extractor, in case the extractor is located overhead, is piped into this inner can. If the honey is poured into the tank from a pail it is advisable to use a wooden float to break the force of the current downward. As the work progresses the honey will gradually percolate through the cheesecloth at the bottom into the main tank outside, the level in the two cans always remaining the same, or practically the same. In case the bottom of the main tank is flat it is better to support the inner can by means of two sticks, one nailed on each side of this inner can near the top and resting on the upper edge of the main tank, the sticks being nailed at such a point that the cheesecloth will be two or three inches from the bottom of the main tank. When the level in both the inner and outer cans has nearly reached the top, the honey may be drawn off at the bottom into cans.

It the honey is to be bottled it should be heated first and bottled while hot in order to get rid of a large proportion of the air in the honey and also to delay granulation. It may be proper to remark at this time that honey that has passed through a honey pump, other things being equal, is likely to granulate rather more quickly than honey which has not yet been pumped. This tendency to more rapid granulation is not very marked, however, unless the pump sucks some air through a leak on the intake side—that is, between the pump and the extractor. It can readily be seen that if this is the case the capacity of the pump is not only reduced, but the amount of air introduced into the honey, even though slight, and churned up with it, so to speak, is quite conducive to granulation. The process of extracting the honey from the comb introduces some air unavoidably. In any case, however, heating is about the only way to expel bubbles of air.

In drawing off the last of the honey from the gate at the bottom of the main tank when the work is over, some time should elapse to facilitate the clarifying of the honey on the gravity principle, so that the cheesecloth will not have to be depended upon too much. Then when the tank is finally emptied the cheesecloth will strain the last of the honey without clogging up to any appreciable extent. We have found that this combination of the gravity principle and the cheesecloth strainer permits the use of one cheesecloth without cleaning, longer than any other plan that we have ever tried, for the

refuse all floats to the top and the strainer really has comparatively little to do.

Medina, Ohio, Dec. 3, 1914.

Marketing Honey

Edward G. Brown, Member Western Honey Producers' Association
Sioux City, Iowa.

Given at the National Beekeepers' Association Convention, Denver, Colorado,
February, 1915

Most of the food that man consumes, the clothes he wears, and the tools he works with, go through a definite channel of commerce; that is, the raw or bulk condition go to the mills or factory, where they are prepared for market at the lowest, possible expense, and in the best possible manner.

From there they go to the jobber in good sized shipments, and the jobber in turn sends them out in smaller shipments to the retailer, who sells them to the ultimate consumer or user, in a single article or package at a time.

No one has yet devised another universal system that will give the satisfaction or economy that this plan does; and I do not believe that any one will for some time to come. You ask, what has this to do with the marketing of honey? Just this: when you want an automobile do you go to the nearest machine shop and have one made which is unlike any other, and for which you will have to have all repairs made especially? Or if you want a wagon, do you have the blacksmith make one to order? Or do you go to the local retail implement dealer and buy a good neat article, put out by some large reliable factory of which you know the name and reputation.

Cattle, hogs and produce generally pass through the large stockyards and packing house for preparation; and thence through the retail channels of trade, frequently to the ones that are in the business of producing them in the live form.

Wheat passes through the elevator and mills, and back again through the retail channel; and the greater part of the butter is churned at large creameries, from cream that is shipped in from the surrounding territory.

You say that all these transactions make a greater expense, but there are also things about the system, that counteract this.

Through modern methods the packer makes use of every part of the animal. The large creamery gets more pounds of butter from the cream, by having the temperatures and the sourness of the

cream, at perfect condition for churning. Far better butter is thus produced than that of the average farm wife; and after this an excellent cheese is made from the buttermilk.

The miller, by mixing the wheat from different districts, is able to grind a more uniform and satisfactory grade of flour, and under all these systems the excess of production is taken from one part of the country, and distributed to the point where there is a shortage.

The beekeeping industry will never reach its full recognition as an agricultural pursuit and the full market value of honey will never be received, until the marketing system is developed to a point equal to that of other agricultural products.

There are a great many things in connection with the development of this system of marketing, that have yet to be worked out. The men that are to do the packing of the honey in the large centralized plants, have to know honey of all kinds. They have to know what kinds the trade want as table honey, and what to use for other purposes; how to blend it, and how much heat it will stand in liquifying, and not change the color or flavor.

They also have to know what metal to make the best tanks of; the best and most economical method of applying the heat, and of handling it through the different stages of packing work.

Next the jobber and his salesman, and the retailer, have to receive an education to some extent, as to what honey is, and how it is produced; for a man without a knowledge of what he is selling and a belief in its genuineness, makes more of a knocker for it than a salesman.

Then, first, last and most important of all, is the consumer. He has to be taught the value of honey as a food, and led to believe that he can get pure honey at any time; and told where he can get it.

A great many of you will laugh and say, that folks know what honey is; but they don't. Not one person in ten in the United States knows what honey really is, where it comes from and how it is produced; and that it has a great food value.

More than that they nearly all believe that extracted honey is an adulterated article, or fraud in some way; and a large percent believe, that it is possible to manufacture comb honey.

Now for the direct economies of packing in large quantities. If a dealer can buy containers (pails and glass jars) in car lots he will be sure to get a better price than the buyer of small lots; and if he uses three or four cars of each, he will probably get a better

rate, than if he uses only one. The car rate of freight is usually about half what it is in small or local shipments.

Then when it comes to liquifying and packing, the large packer will do three times the amount of work with his fuel, and will not have the waste, because his equipment is more perfect; and he will have his equipment in use all the time, while the individual beekeeper will have his lying idle most of the time.

Then when it comes to selling, he has an advantage of about five to one over the small beekeeper; for the following reasons: the beekeeper wants to sell honey when he has it, and all at once if possible; and the packer will sell honey when the trade wants it, and in such quantities as they demand. The beekeeper builds up the demand, then his stock is exhausted; and by the time the next crop comes, the demand has to be rebuilt.

On the other hand, the large packer furnishes a steady supply by careful grading of the same kinds of honey from various districts thus furnishing a uniform run.

The local beekeeper may have a large crop of fine white honey one year, and the next his crop will be small and off grade, and this tends to breed distrust and dissatisfaction among the consumers.

Then comes the work of creating the demand. The small producer can not afford to carry on a large and steady system of advertising, while that is part of the packer's business. Then when the beekeeper starts out to sell his product, he has but the one thing to sell, and his sales will not be large enough to warrant his using much money for railroad fare. He will also probably find that there have been several beekeepers over the same territory and for this reason he does not make nearly as many sales as he expected to.

As he expects to make only the one trip, for as soon as his crop is sold he is done, he places as large a stock as possible; with the result that the greater portion of it granulates before it is sold by the grocer, and that makes the grocer disappointed.

The man selling for the large packer, is the traveling man for the jobbing house. He makes his route every week or two, and as he sells several hundred other articles, he is willing to place small orders, which allows the grocer to keep a fresh stock. As this stock is shipped with a large shipping order of other goods, and from a central point, the freight to the grocer is of but little consequence.

And now for a few of the things that serve as a drawback to the honey market.

When the farmer has a crop of grain harvested, and wants some money, he dumps this crop into the elevator, and takes the price that the supply and demand of the world has set. But when the beekeeper gets his crop of honey, he takes it to the store and tries to make an elevator out of the last end, instead of the first end of the general course of merchandising. As a consequence his market is woefully flooded, the price has taken an awful fall, and he don't think much of the bee business.

Because of this overstocking the grocer gets a lot of granulated honey on his hands, and he thinks less of the honey business.

Then again the beekeeper thinks the grocer can sell his honey for a good price, whether the flavor and quality suit the people of that community or not.

Under the above conditions, there have been towns in Iowa, where good comb honey was selling for three sections for 25 cents. It was slow sale at that, with no demand for extracted honey at all. This same honey would have found a good market in other places at 25 cents per section, and 10 pound pails would readily bring \$2.00 each.

This is not entirely the beekeepers' fault, but the fault of the honey marketing system, or rather the lack of any system at all for marketing it.

The greatest drawback of all is the ignorance of the consumer as to what honey really is. One is accustomed to clover honey, another to basswood, another to buckwheat, another to California, orange or sage, and when they get a honey of a different variety, they at once cry "adulteration."

Then again there comes to the wholesaler a demand for honey, and he in turn sends in an order to some packer of syrups or preserves. Now this man don't know honey, or anything about the different grades, so he buys the cheapest pure honey he can get from some large produce dealer or importing concern, regardless of color or flavor.

He in turn packs it for the wholesaler with the result, that everybody along the line is disgusted with honey.

There are some firms packing honey that understand the grading and handling of it, but there are many others of the kind of which we have just spoken.

What the beekeeping industry needs, is more **honey educated** packers.

Now for unripe honey. Honey that has not been thoroughly capped and ripened in the hive, is very apt to sour; and never has

the body and delicate flavor of well ripened honey. This has been responsible for much dissatisfaction on the part of the honey dealers, and one firm in Chicago made the statement, that it was impossible to seal honey in tumblers and have the lids stay on, unless it was well heated and sealed with a vacuum.

They had gotten unripe honey, and did not know what the trouble was. The real trouble was that some beekeepers had gotten the "get rich quick" itch and had extracted too soon.

This article deals largely with extracted honey; and it is the belief of the writer, that the law requiring the stamping of the net weight, will have the greatest correcting influence on the comb honey market, of anything that could be done.

Honesty is the governing policy of success; and that ruling is apt to pinch, if the policy of dishonesty is carried very far.

The writer does not expect this article to immediately revolutionize the marketing situation, but does believe that it outlines the system that will have to be developed, before the honey market reaches a uniform level, set by supply and demand at all points.

One Gallon Glass Jars For Honey

(Continued from page 288)

and the word honey could be embossed on the bottle, in glass also.

It is possible that such bottles are already made, if so I have failed to locate them; as at this writing I have not yet succeeded in reaching the manufacturing company. If these are a success we may be able to have some made to hold six pounds of honey.

Later—The Illinois Glass Co., Chicago, Ill. make the glass bottles with a larger mouth, in both the gallon and the one-half gallon size; and a brass cover.

If you publish my article, please make all necessary changes in same as above. Please make arrangements with the manufacturer for the bottom price direct to the beekeepers, same as you do with the other honey retainers, etc.

Thanking you for your efforts in behalf of the beekeepers.

MEMBERSHIP IN THE NATIONAL BEEKEEPERS' ASSOCIATION Is But Two Dollars Per Annum

What this two dollars buys: In the first place the headquarter National fee is \$1.50 of which one dollar is taken and paid for your year's subscription to the official organ, THE BEEKEEPERS' REVIEW. Then you have to be a member of your local affiliated association before you can become a full fledged member of the National. Send two dollars (Do it today!) to Secretary Wesley Foster, Boulder, Colorado, or if more convenient, to this office and you will receive in return a receipt in full for your money. You are invited to join with us, will you come in?

The Stingless Bee

CELIA BALDWIN WHITEHEAD

Of honey I am very fond;
I'd like to keep some bees
To gather honey all the day
From off my flowers and trees.

I'd love to see them spread their wax
And skillful build each cell,
And labor hard to fill them up
With what I like so well.

But bees have stings, and I'm afraid
To venture near a hive;
If I should get amongs't the swarm
I'd ne'er get out alive.

But nowadays we've many things
With "less" attached thereto,
We've fireless cookers, hornless cows
And boneless codfish, too.

The wireless telegraph reports
The cryless babe enroute,
The iceless soda fountains flow
And horseless wagons toot.

The seedless orange grows apace,
The thornless roses bloom,
The headless ballot prophecies
The grafters' graftless doom.

The painless dentist pulls our teeth,
With flourless bread we're filled,
We're carved with knifeless surgery
With smokeless powder killed.

With all these lessons in the art
Of making thingless things,
Why can't our geniuses produce
Some bees that have no stings?

What joy I'd take to walk about
Beneath my shady trees,
And gather in the luscious sweets
Produced by Stingless Bees.

Michigan's 50th Annual Convention at Grand Rapids December 15th and 16th, 1915

As previously announced by Secretary Millen, this meeting will without a doubt be one of the very best ever held in the state, if not, it will not be the fault of our Secretary, for he is working hard to that end. One of the new features for this year's meeting that is hoped to work out, is the giving of medals for best display and samples of honey exhibited at this meeting. We copy from a circular letter being sent out to some of the prominent beekeepers of Michigan as follows:

"You know the next meeting of the Michigan Beekeepers' Association is to be held at Grand Rapids on December 15th and 16th, next. This is the fiftieth meeting of the association, and we are planning to make it a little out of the ordinary.

One phase of the meeting is the exhibit. If we can get a few of the most prominent beekeepers to promise an exhibit of comb or extracted honey, beeswax, and other apiary appliances, we plan to provide medals as prizes. The first one would be a gold medal, provided by manufacturers of bee supplies, and to be won three times before becoming the property of the beekeeper. This would be given for the best all around display by a beekeeper.

Then we may provide silver medals for the best exhibits of comb honey and extracted honey; and bronze medals for secondary places.

Of course it will be useless for us to attempt this unless a few of the prominent beekeepers, like yourself will promise to send in an exhibit. By letting you know at this date you will be enabled to prepare and save the choicest of your crop. If we can get a good exhibit, I am sure it will add much to the meeting and will give the beekeepers quite a little advertising.

I should be glad if you would send me an early reply, so that I can go ahead, and if sufficient number of beekeepers promise to do their part, we will go ahead and do ours."

Very truly yours,

F. ERIC MILLEN,

Dishonesty in Advertising

Dr. A. F. Bonney, Buck Grove, Iowa

I am going to premise this short article with the statement that there

is not a nostrum on the market, from Peruna to Duffy's Malt Whiskey, but

what is dishonestly advertised, in that they make exaggerated claims, if nothing more. Queen breeders are also offenders in a similar way. "Our bees are hustlers," "Unequalled for honey and gentleness," "bred strictly for business," "Red clover ———," "Three-band, long-tongued, red-clover Italian queens." However, there is not nearly so much misrepresenting as in former years and I look soon to see the "long-tongued" fable eliminated.

Even manufacturers of feeders cannot refrain from making what I look on as dishonest claims. One says: "In case of foul brood you can feed medicated syrup, and your bees will build up strong and healthy."

I have written much at different times about the Bee Sting Cure for Rheumatism, and, I believe, to some purpose. I investigated every alleged cure I saw reports of, and found but one that claimed to be still free from the disease. Then finding a person who had an idea they would like to try the stinging, but could not muster up courage (and I did not urge them), I thought to experiment, as all doctors will, and offered to supply a fine new remedy if they would try it. No cure, no pay. I gave the patient a pint of honey, extracted, with written instructions to take two tablespoonsful at 8:00 and 10:00 a. m. and 2:00 and 4:00 p. m. and on retiring, and to drink NOTHING for at least one hour after taking a dose of the medicine.

The lady was well in less than two weeks and has not had an attack in five months.

I mean by this that she claimed to be free from the old pains, and she gladly paid me for the honey, but

she paid medicine prices. I am afraid that if she finds out she was using nothing but BONNEY HONEY she will go to bed sick.

Now what am I to do? If I publish this and the rheumatics in the country go to using honey it will increase the sales beyond all guessing. If only the men in the United States took the remedy it would mean 19,000,000 pounds of honey per month. If one man in four took the treatment it would total the sale of 60,000,000 pounds of honey per year.

Am I to hide my light under a bee hive? Never. I am having some cards printed which read like this:

HONEY A CURE FOR RHEUMATISM

"A well known Iowa doctor has found that PURE HONEY is a cure for RHEUMATISM if taken as follows: 'Eat regularly at six, twelve and six o'clock, and take the honey, two tablespoonsful to the dose, at eight and ten o'clock a. m., two and four o'clock p. m., and at bedtime. DRINK NO FLUIDS OF ANY KIND FOR AT LEAST ONE HOUR AFTER TAKING A DOSE. Either Comb or Extracted (Strained) honey can be used."

These I shall send out. Why not? Who knows but what I have really discovered something? What? Why let the Karo kusses have a monopoly of the advertising and sales. In thus teaching the people to use honey we do not a bit of harm, and may keep them from killing themselves by swilling "Patent Medicines" or stuff incompetent doctors give them. I feel that in getting people to use lots of honey I am doing them a physical, mental and spiritual good. Selah!

School for Beekeepers

August 4, 5, 6, 7, 1915, Hathorne, Mass., Massachusetts Agricultural College Extension Service and Essex County Agricultural School Cooperating

This school is intended to be of help not only to the professional beekeeper, but to market gardeners, fruit growers, growers of cucumbers under glass, small fruit producers, cranberry culturists, managers of estates and institutions, science teachers, librarians but persons contemplating beekeeping as well.

FIRST DAY

August 4, 10 A. M.

"Establishment of Bees in Essex County," Dr. Burton N. Gates.

"Demonstration and Explanation of Simple Beekeeping. Equipment, Its Preparation and Use, as Hives, Super, Section, Frames, Traps, Etc.," Dr. Burton N. Gates and Mr. Gladstone H. Cale.

1:30 P. M.

"Instruction in Handling Bees (demonstration with live bees)," Dr. Burton N. Gates.

SECOND DAY: FRUIT GROWERS' AND MARKET GARDENERS' DAY

August 5, 10 A. M.

Demonstration, "Maintaining Bees in Cucumber Houses," Mr. Gladstone N. Cale.

"The Control of the 'Moth' ", Dr. Burton N. Gates.

"Demonstration of Handling Bees," Mr. Gladstone H. Cale.

1:30 P. M.

"Necessity for Bees in Vegetable and Fruit Production," Mr. S. L. Davenport.

"The Orchard Apiary; Its Establishment," Mr. Gladstone H. Cale.

Question box.

THIRD DAY

August 6, 10 A. M.

"The Races of Bees," Dr. Burton N. Gates.

"The Colony: Its Development and Members," Mr. Gladstone H. Cale.

"The Products of the Hive," Mr. Gladstone H. Cale.

1:30 P. M.

"Honey Sources: Important Bee Forage," Mr. Fred A. Smith, Director.

"Making a Start With Bees," Dr. Burton N. Gates.

FOURTH DAY: BEEKEEPERS' DAY—SPECIAL PROGRAM

August 7, 10 A. M.

BEEKEEPING MANIPULATION, AS

"Handling of Swarms," Mr. Gladstone H. Cale.

"Increasing the Bees," Dr. Burton N. Gates.

"Transferring a Colony of Bees to a Modern Hive, (demonstrated)," Dr. Gates and Mr. Cale.

"Discussion of Bee Diseases and Their Treatment, (demonstrated)," Dr. Gates and Mr. Cale.

"Requeening; Italianization," Mr. Geo. W. Adams, Rowley, Mass.

"Suggestions for Honey Production," Mr. Gladstone H. Cale.

Question box.

If the beekeepers have special subjects which they desire discussed or demonstrated, they will please communicate in advance with Mr. Fred A. Smith, Director of the School.

Exhibitions

There will be beside bees in glass and other hives, a display of the best and most simple beekeeping equipment.

A WISE BLACKSMITH

(It is not often that one runs across a gem like the following in the daily papers, and we beekeepers can "pat ourselves on the back" with the thought that we have a vocation while fitted for the most strenuous of labor, is also well adapted to the needs (by varying the system) of those not so fortunate in health and strength. In other words, the beekeeper can console himself with the thought that during his declining years, if he cannot attend to as many colonies as when in his "prime" the number can be reduced to correspond with his strength and energy. The clipping is as follows: Ed.)

Jacob J. Lyon is 85 years old and every day he stands at his anvil in Homer, Mich., pounding away. When he is not blacksmithing, he is attending to his swarms of bees in the back yard of his little home a few doors from the shop.

The average woman grows old more comfortably than the average man. There is likely to come a time in the man's life when he steps over the line between active usefulness and the enforced leisure which eats out his heart and darkens his remaining days. The housewife always finds tasks suited to her strength.

The necessity of labor is not realized until

one is suddenly deprived of the privilege of taking part in the world's work. There is no torture, mental and physical like prolonged idleness for a man who has in him the habit of industry.

Mr. Jacob Lyon is a very lucky or a very wise man or both. Between his beehives and the forge he has provided for old age in a way that no fortune in United States bonds could have done. Many lay by cash against the evening years, but how many are shrewd enough to cultivate interests which will keep their hands and minds occupied until the end?

The University of Minnesota

Department of Agriculture
University Farm, St. Paul

June 16th, 1915.

The Beekeepers Review:-

Mr. L. V. France, of the University of Wisconsin, has been appointed as Assistant Professor of Bee Culture at the University of Minnesota, to take effect August first.

Mr. France is the son of the well known E. N. France of Plattville, Wisconsin, and he brings with him his father's enthusiasm for the improvement of bee culture in the North West.

Sincerely yours,

FRANCIS JAGER
Chief of Division

Bee Meetings Next Fall

Some time ago a committee was appointed to arrange the dates of next winter's conventions on the circuit plan as far as possible. Several months have been required to arrange the dates to the satisfaction of all concerned. The States joining in the circuit and the dates on which conventions will be held are as follows:

1. Ohio Nov. 26-27.
2. Illinois Nov. 29-30.
3. Kansas Dec. 1-2
4. Missouri Dec. 3-4.
5. Minnesota Dec. 7-8.
6. Wisconsin Dec. 9-10.
7. Indiana Dec. 10-11.
8. Iowa Dec. 13, 14, 15.
9. Michigan Dec. 15-16.
10. Chicago-Northwestern Dec. 17-18.

From the above dates it will be seen that conventions will be in session continuously excepting Sundays. By this plan, speakers of prominence will be able to attend a number of conventions without inconvenience. If the dates could have been conveniently arranged, less travel would have been necessary by having adjoining States follow each other. Some dates were fixed and the other meetings had to be adjusted to them. It is to be hoped that the circuit plan will prove so popular that somewhat more convenient arrangements may be possible another year. The location of the various State conventions will be announced by their respective secretaries. Some locations have apparently not yet been selected.

FRANK C. PELLETT.

THE BEEKEEPERS' REVIEW
THE BEEMAN'S OWN
PAPER--DO YOU PATRONIZE
IT AS YOU SHOULD?

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. PEARL CARD CO., Clintonville, Conn.

FOR SALE—One car Alfalfa extracted honey. Address W. H. PENNINGTON, Ontario, Ore.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Glassed comb and extracted honey; also beeswax. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

FOR SALE—Light extracted honey 8c Amber 7c., half cent less, in ten case lots, two 60 pound cans to case. H. G. QUIRIN, Bellevue, O.

WANTED—A car or less of White Clover, Raspberry and Basswood extracted honey, in 60 lb. cans. Also glassed comb honey. I. J. STRINGHAM, 105 Park Place, N. Y.

WANTED—White Comb new crop 11 and 13 oz. weights well capped. To be packed in cartons we will supply. Write at once quality, quantity and price. HOFFMAN & HAUCK, Woodhaven, N. Y.

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

FOR SALE—Finest quality water white sweet clover extracted honey, two 60 lb. can cases, at only 7c per pound. Also Fancy white comb honey at \$3.00 per case of 24 sections; crated, 9 cases to crate for shipment. Prices F. O. B. here. JOE C. WEAVER, Cochrane, Ala. tf

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

J. C. Wheeler, 921 Austin Boul., Oak Park, Ill.

Hoffman & Hauck, Woodhaven, N. Y.

WANTED—Heavy weight glassed Buckwheat Comb. Packed in cases of uniform stamped weights. State weight, price, quantity and date ready to ship. HOFFMAN & HAUCK, Woodhaven, N. Y.

FOR SALE—Twenty-two cases, two 60lb net cans to the case, of amber extracted honey at only 6½c per pound on car in Pa. This is a shipment of Texas amber honey, rather better for baking purposes than table use, still some may be able to use it for the latter. The Review has taken over this bunch of honey in settling up an account for one of our subscribers. We can furnish a small sample from this office to intending purchasers. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

CHICAGO—At this writing we have had no arrivals of white comb honey of the new crop from surrounding country, but the southern states have sent in more or less comb honey which has sold at from 12½ to 18c per lb. according to color, flavor and appearance. The demand has practically been confined to the best grades as is always the case at this time of the year.

More or less extracted honey is offered, but meets with very little demand. None of the larger buyers are on the market; therefore, prices are without change from recent quotations with quite a quantity carried over of the year of 1914.

Beeswax is steady and good sale at from 30c to 32c per lb. according to color and cleanliness.

July 17th.

R. A. BURNETT & CO.,
173 W. South Water Street.

BEEES AND QUEENS

BEEES FOR SALE—100 colonies. J. H. STONEMAN, Box 264, Blackfoot, Ida.

FOR SALE—One 20 and one 87½ acre farm, 200 colonies of Italian bees, equipped for extracted honey, best of soil and good bee locality. Address L. R. BEEBE, Mosinee, Wis., Route No. 1.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

GOLDEN or Three-banded Italian Queens ready the first of April

Tested Queens, each	\$1.00
6 or more, each .....	.85
Untested, each .....	.75
6 or more, each .....	.65

Special prices on long orders. Everything guaranteed. I. N. BANKSTON, Buffalo, Texas. tf

BEST THREE BANDED ITALIAN QUEENS—June to October, mothers selected from more than 100 colonies and reared in hives running over with bees, according to the latest scientific methods. Every queen a dandy. Satisfaction guaranteed. Each, 75 cents. Per doz. \$7.20. Per hundred \$50.00. Also Bees and Honey J H. HAUGHEY, Berrien Springs, Mich.

MY GOLDEN ITALIAN QUEENS are extra fine. One untested \$1.00, tested \$1.50. Extra select tested \$2.00. No disease in neighborhood. F. M. ALLEY, 697 N. Cottage St., Salem, Ore.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to Introduce Queens" 15c. "How to Increase," 15c, both 25c. Untested queen 75c. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 80 new 10 fr. hives, 200 new 10-frame 5 $\frac{3}{8}$ in. depth supers nailed and painted (220-10 fr. 40- 8 fr. ext. sup. 5 $\frac{3}{8}$ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain Address Wm. McKIBBEN, Ontario, Ore.

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each has for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Robert E. Foster, Rifle, Colorado, 200 to 500 colonies.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

WANTED—Eeswax at 31c per lb. JOHN O. BUSEMAN, 4141 N. 7th St., Philadelphia, Pa.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

HONEY LABELS and Printing at lowest prices, 36 page catalog free. "Get our Beekeepers' Special Printing Offer." LIBERTY PUB. CO., Sta. D., Box 4 J, Cleveland, Ohio.

HONEY JARS FOR SALE—About twenty gross, square glass honey jars, glass top and spring fastener, from one-half to two pounds. In original packages at less than factory prices. Have quit the bottling business. W. H. SETTLE, Gridley, Ill.

WANTED—Healthy young man, farm hand preferred, to work with bees. Experience not necessary. Intelligence, honesty and sobriety imperative. Married or single. Excellent permanent opportunity for right man. D. W. MILLAR, Holguin, Cuba.

WANTED—200-10 frame and 100-8 frame hive bodies. Can use second hand bodies in lots of ten or more. State the number you have, the condition they are in and the price you will take for them on board car at your station. Address Deer Lake Apiaries, Clarkston, Michigan.

FOR SALE—400 Comb Honey Supers made up mostly 10 frame in lots of 10 or more 40c. 100 lots 35c each. W. D. SOPER, Jackson, Mich.

FOR SALE—A good Bee location. For information address GEORGE PARKS, Errington, P. O., B. C., Canada.

FOR SALE CHEAP—In good location 32 $\frac{3}{4}$ acre farm, nice house, good barn, stable, sheds, workshop, 50 stands of bees, extra hives, etc. For full information address J. A. JANSSEN, R. F. D. 4, Charlevoix, Mich.

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using Eureka Paste. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

POULTRY

White Wyandottes and Buff Orpington eggs: \$1.00 per 15, \$5.00 per 100. Healthy, vigorous stock. G. M. Withrow, Mechanicsburg, Ill.

FOR SALE — Buttercup hatching eggs. Champion layers of extra large pure white eggs, larger than Leghorns and eat only half as much. 15 hatching eggs, price two dollars. Thoroughbred stock, for sale cheap. Tom Barron's English White Leghorns, world's champion layers, six times winners in great laying contests such as the state poultry experiment stations at Mountain Grove, Missouri, and Storrs, Conn. Net show birds but the world's best for egg production. 15 hatching eggs, price \$3.00. HENRY WOODWORTH, Box 505, Cheboygan, Mich.

Queens of MOORE'S Strain of Italians

PRODUCE WORKERS

That fill the supers quick
With honey nice and thick.

They have won a world-wide reputation for honey gathering, hardiness, gentleness, etc.

Untested queens, \$1.00; six, \$5.00; 12, \$9.00.

Select untested, \$1.25; six, \$6.00; 12, \$11.00.

Safe arrival and satisfaction guaranteed.
Circular free.

I am now filling orders by return mail.

J. P. MOORE,
Queen-breeder. Route 1, Morgan, Ky.

Review Subscribers Having Honey For Sale

We are herewith submitting a list of subscribers having honey for sale. This list includes those only who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale and the letter "C" following the address indicates they have comb honey for sale and the letter "E" extracted, both letters indicating the subscriber has both comb and extracted honey for sale. This list is published free to paid in advance subscribers to the Review. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

Mrs. Kathrine Beattie, Thibodaux, La. E.
Geo. A. Hummer, Prairie Point, Miss C.
Joe C. Weaver, Cochrane, Ala. C & E

HORSEMINT

Wilmon Newell, College Station, Tex. E
W. C. Collier, Galoid, Texas E.

AMBER

S. E. Miller, Rhineland, Mo., E.
M. W. Harrington, Williamsburg, Iowa E.

WHITE CLOVER

Frank Murray, Chase, Michigan C & E.
Frank Wilmert, Elmore, Minn. C.
D. R. Townsend, Northstar, Michigan E.
A. H. Fralick, Homer, Mich. E.
E. B. Rosa, Monroe, Wis. E

ALFALFA

M. D. Phillippe, Elgentro, Calif., E.

SPANISH NEEDLE

J. VanWyngarden, R. No. 4, Hebron, Ind., E.

Choice White Clover Extracted Honey For Sale

Left upon the hives until thoroughly cured by the bees; put up in new 60 pound tin cans, one and two in a case for shipment. This thoroughly-cured-upon-the-hive honey is a little higher in price than the ordinary, something in comparison with creamery and the ordinary store butter. I quote a price of \$6.00 for a single can, or 10 cents per pound in lots less than ten cases, two cans to the case. For ten cases or more the price will be 9 1-2 cents per pound. Above prices are free on board the cars here. Sample free. Address, D. R. Townsend, Northstar, Michigan.

Gallon and Half-Gallon Glass Containers for Honey

Of all the containers for honey we have seen, this gallon jug with bail is best. Fill it with rich, ripe, roapy, delicious white honey, and watch your prospective customer's "mouth water" as he beholds the most gracious sweet ever "tickled the pallet" of mortal man glistening in its purity, for can't he see it (!) The glass is of pure white flint, consequently, does not obstruct the vision and it is a vision, too, to the would-be customer. But you must see it when filled with honey to appreciate its attractiveness. We have made arrangements to furnish these flint glass jugs with bails f. o. b. Alton, Ill. as follows:

3 Dozen 1 gallon, per crate.....	\$4.75
6 Dozen ½ gallons, per crate.....	7.00
½ Dozen 1 gallons in reshipping case, per case.....	.80
1 Dozen ½ gallons in reshipping case, per case.....	.60

The two quotations above are for containers each packed singly in double corrugate paper, so single jugs when filled with honey can be shipped singly without other packing. The last two quotations are for retail trade at home, or where a shipment is made of a half dozen or dozen, according to the size of the jugs ordered. They are wide mouth and have American metal screw caps.

Address all orders with remittance

THE BEEKEEPERS' REVIEW, Northstar, Mich.

Golden Italian Queens

Mr. Beekeeper, do you want the best queens that money can buy? If so try this strain of Golden Queens that for fifteen years has been a leader. All queens reared from superior Golden mothers and mated with select Golden drones; are large, vigorous and prolific; the bees gentle and hustlers, and are mated throughout the United States as a disease-resisting strain. Mated from strong nuclei, three to five full Langstroth frames. Safe arrival (U. S. and Can.) purity of mating and satisfaction guaranteed. Write for descriptive circular.

PRICES OF QUEENS

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
Untested....	\$1.50	\$ 7.50	\$13.50	\$1.25	\$ 6.50	\$11.50	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Tested.....	2.00	8.50	15.00	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Sel. Tested..	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Untested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	11.00	18.00

Breeders \$5.00 to \$25.00

BEN G. DAVIS, Spring Hill, Tennessee

Please mention The Review when writing.

TENNESSEE-BRED QUEENS

43 Years Experience in Queen Rearing--Breed 3-Band Italians Only

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
Untested.....	\$1.50	\$ 7.50	\$13.50	\$1.25	\$ 6.50	\$11.50	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Sel. untested	2.00	8.50	13.50	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Tested.....	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Tested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	10.00	18.00

Bees by the pound, 1 lb., \$1.25; 2 lb., \$2.25; 3 lb., \$2.75, July August and September.

Nuclei (no queen) 1 fr. \$1.50; 2 fr. \$2.15; 3 fr. \$2.75; 4 fr. \$3.50; pure 3-band Italians.

Select queen wanted, add price.

**Capacity of yard, 5000 queens a year--Select queen tested for breeding \$5.00
The very best queen tested for breeding \$10.**

Queens for export will be carefully packed in long distance cages, but safe delivery is not guaranteed.

My father bought queens from you over thirty years ago. They were good ones.

S. D. Camilus, N. Y., June 12, 1912.

I have some fifty of your queens that you sold to F. Farr last season, and for beauty, hardiness and good honey gathering qualities, they are second to none among our 1,200 colonies.

M. A. Gill, Longmont, Colo., July 7th, 1903.

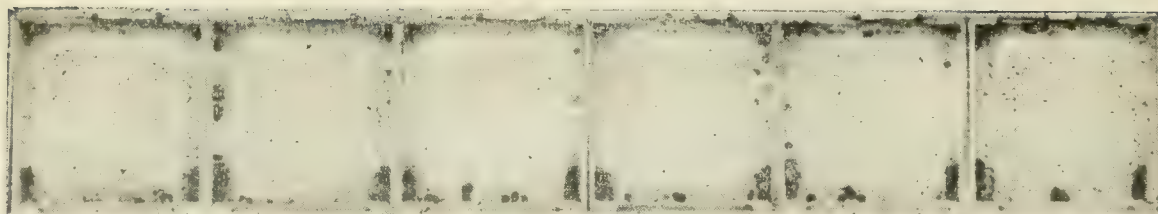
Six years ago I got six queens from you; they were the finest I ever saw. The six colonies averaged 185 pounds of comb honey.

James I. Davis, Lincoln, Neb., May 24, 1909.

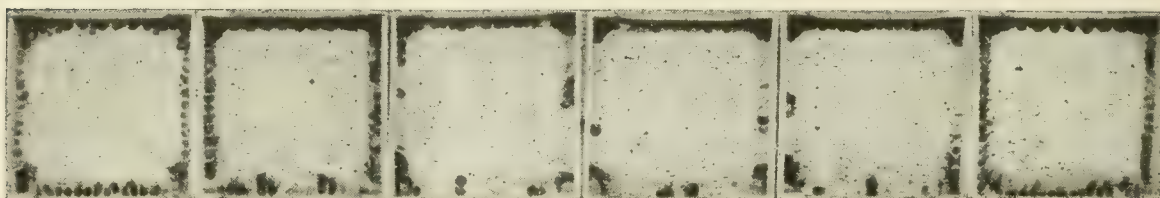
I have one of your queens first year making me seven finished cases; second year, five cases, and this year, two cases at time of supercedure, July 10.

H. G. Henthorne, Plattsville, Col., July 16, 1907.

JOHN M. DAVIS, Spring Hill, Tenn.



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

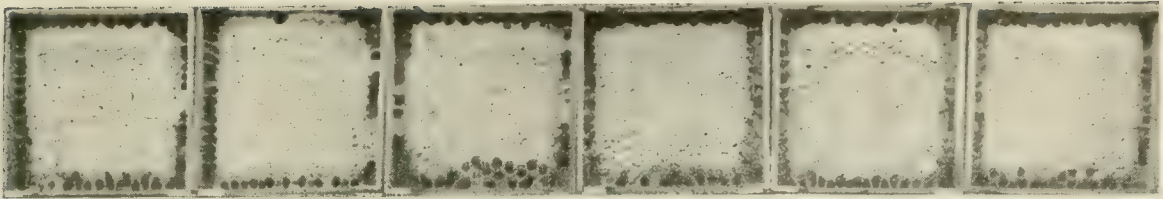
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

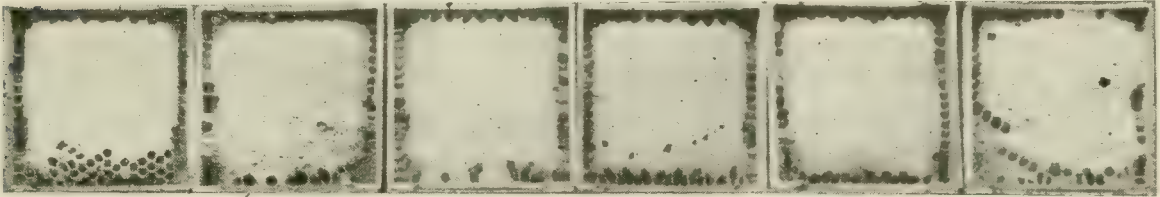
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

COMB HONEY

Fancy:

Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than $12\frac{1}{2}$ oz. net, or $13\frac{1}{2}$ oz. gross. The top of each section in this grade must be stamped, "Net weight not less than $13\frac{1}{2}$ oz."

Number One:

Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber in color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

Number Two:

This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES

Honey packed in second hand cases.
Honey in badly stained or mildewed sections.

Honey showing signs of granulation.

Leaking, injured or patched up sections.

Sections containing honey dew.

Sections with more than 50 uncapped cells, or a less number of empty cells.

Sections weighing less than the minimum weight.

All of such honey should be disposed of in the home market.

Extracted Honey

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W," "L. A.," "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can, shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES

Extracted honey packed in second hand cans.

Unripe or fermenting honey, weighing less than 12 lbs. per gallon.

Honey contaminated by excessive use of smoke.

Honey contaminated by honey dew.

Honey not properly strained.

TRADE

The REVIEW is now buying all kinds of beekeepers' supplies for the subscribers. We get wholesale prices on all supplies, returning nearly all the difference between the list price and wholesale price to the subscriber ordering. It is the desire of the REVIEW to make only enough out of the supplies bought for the subscriber to pay postage and the cost of advertising. This scheme is so liberal that ALL ought to take advantage of this buying privilege.

Never before in the history of beekeeping have the masses had the privilege of buying their supplies at near wholesale prices, and a person is very short sighted to pay the LONG CATALOG PRICE for his supplies when this privilege of buying at the lower price is open.

Have you got into such a "rut," that you MUST order your goods through the OLD HIGH PRICED channel or are you progressive enough to break away from the "Ties that bind" and come over into the new and better way of buying, i. e. that of buying collectively. Some one has said that it would "take one hundred years to educate the people to the importance of buying collectively." About ten percent of beekeepers are NOW educated up to this standard and are taking advantage of this grand privilege, and this appeal is to the other ninety per cent who seem not to be able to comprehend that there is a possibility to make their dollars go further than through the OLD, OUT OF DATE way of buying individually.

The dealers will "tickle" when they hear you say, "I'm from Missouri, I have to be shown" for they know the one uttering these sentences is so far behind the times that he will live in the "old rut," to the benefit of the dealer and finally drop out, without ever receiving a single benefit from cooperation. DO NOT BE THE ONE TO STAND BACK TO BE SHOWN, but some to the front and be one that will say "We will show them," and take the word of your old friend Townsend, that we will win, AND IN LESS THAN A HUNDRED YEARS, too.

We hope to add another 10 per cent to the already well pleased 10 per cent that are now buying through the REVIEW, before the end of the year, will you be one of them to save a few dollars by this collective buying!

Subscriber Mr. D. C. Polhemus, Lamar, Colorado ordered a car of Tin Containers for honey a year ago upon which we saved him \$30.00. This year besides several local orders, we are shipping him 40 foot furniture car containing the different sizes in friction top cans and pails, also 60 lb. square honey cans, upon which we will likely save him \$40.00 based upon prices he had previously paid by buying individually, another instance where buying collectively has "panned out" to the advantage of the collective buyer.

A member of the Illinois State association paid \$14.00 per hundred for gallon square syrup cans in corrugated paper mailing cases, the Review by buying on a large scale is able to sell a better one for only \$11.00 per hundred. We could go on and fill this number of the REVIEW with similar instances of well pleased REVIEW customers who have saved all the way from a dollar to \$30.00 on single deals they have bought through the REVIEW, but space forbids mentioning others at this time. You may think you are getting a very close price through the dealer you have been buying of along back, but all we ask is for you to send us the same money you have been paying in the past, you saying of whom you bought, we will take the money and buy at the very closest price possible, returning you the difference, if any. Do not write asking for prices, as we have none, but just make out your order as usual, inclosing the usual amount of exchange, say whose goods you want and we will do the rest.

A trial order will convince you. Hereafter, address all orders for beekeepers' supplies of every sort to

THE BEEKEEPERS' REVIEW

NORTHSTAR, MICHIGAN

Golden and Three Banded Italian Queens For Sale

The Review has made arrangements with the following queen breeders to furnish Review subscribers with queens at their price, listed in other part of this number of the Review. It will be noticed that the list is of the most reliable breeders we have at the present time, and we take pleasure in offering their stock as the very best obtainable at any price, not excepting imported stock. We have spoken for a goodly number of those fine queens, so can promise our readers very prompt delivery at the present time.

The Island bred queens we are offering are produced by Mr. J. E. Marchant of Florida, and as the name would suggest, are bred on an isolated island, free from impure bees, consequently ought to be all purely mated from select stock. The Marchant stock sells for some more money than the others, and likely cost some more to produce.

The Mr. John M. Davis strain of three banded Italians needs no introduction at this time,

his 43 years experience as a breeder for the market has placed his fine stock far above the average, and the beauty of it is, he promised to ship all queens almost by return mail. Order through The Review to be sure of this very prompt service. The price we sell at is given in his advertisement on another page

Mr. J. P. Moore strain of three banded queens is world renowned for gentleness, hardiness and good honey gathering characteristics. Mr. Hutchinson used to say there was **none better to be had**. Mr. Moore has promised us that he would mail queens by return mail to Review subscribers. An order through the Review would insure prompt delivery.

Mr. Ben G. Davis, breeder of the "Davis" famous "Goldens." Mr. Davis in his strain of goldens has combined honey gathering qualities with beauty and gentleness. There has more favorable comment reached the Review office regarding "Ben's" goldens, as disease resisters than any other breeders. This means that they are a hardy and industrious strain. Ex-Director Buchanan says "they are the best disease resisters I ever saw." Mr. Buchanan was State inspector of apiaries of Tennessee for several years and ought to know. Mr. N. E. Frances says "They are wonderful disease resisting bees." If you are in an European foul brood location, it would look as if this strain would be the one to select as "good housekeepers" to fight this disease with. Mr. Davis has promised to mail Review orders promptly, by return mail.

In requeening this Fall, mail all orders to **THE REVIEW, Northstar, Michigan.**

Our 1915 Crop of White Clover Extracted Honey For Sale TOWNSEND'S ULTRA-QUALITY

Gathered from the clean meadows of old Gratiot County, where hardly a single other blossom can be found, except the White and Alsike clover, we can this year offer Clover Extracted Honey in its purity. In the production of this crop of honey, we offer you our forty years' experience in learning how to produce the **very best quality of honey from the very best honey nectar producing plant in the world**, White and Alsike clover. Combs are provided, so no honey is extracted until it is thoroughly cured on the hive, by the bees. Besides this, our honey is produced in **nice clean white combs**, above queen excluders. Last Fall, these white combs were cleaned of all honey adhering to them, by the bees, lest there should be some little old sour honey from last year mixed with this new crop to impair its flavor. Rich, ripe, roapy, are some of the "pet names" given our honey by the consuming public. Of course, this Clover honey, handled as we do, would naturally be of a most delicious flavor, aroma, bouquet. As usual, this 1915 crop of Ultra-quality white clover extracted honey will be canned in brand new, bright, shiny, tin cans, containing 60lb net weight, and crated one and two in a case for shipment, the bulk being crated, two in a crate. It costs some more to produce Townsend's Ultra-quality honey, than the ordinary extracted honey upon the market, then as it is evaporated down so close and heavy body, we do not get so many pounds by this process, consequently have to sell it for a little advance over regular stock. We quote you this fine stock as long as it lasts F. O. B. our station as follows: one 60lb net can cased singly of this best stock at \$6.25 per can; in cases of two cans, one to nine cases inclusive, at 10 cents per pound; 10 or more cases at 9½ cents per pound. We will this year make a charge of 10c for a sample of this fine honey, but will return 25c with your first order to pay you back for your money and inconvenience in remitting same.

While our entire crop of Townsend's Ultra-quality extracted honey is still upon the hives "curing" as we go to press, some will be ready by the time this number of the Review reaches you, so you can order upon receipt of this, expecting your order to have our most prompt attention. Our **binding guarantee** is that if this Townsend's Ultra-quality extracted honey is not as good honey as you ever bought at any price, or, if for any reason you do not care to accept it upon arrival we will gladly take it off your hands and refund your money, including all freight charges. Could we offer more! Of course you will realize we could not make this offer if our stock of honey was "just ordinary" but Townsend's Ultra-quality extracted honey is not of the ordinary kind, so we do not fear the results of this binding guarantee. Remember there is but one Townsend's Ultra-Quality extracted honey and to secure this splendid brand address

E. D. TOWNSEND & SONS, Northstar, Michigan, U. S. A.

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, furnished at 30c. per thousand postpaid. Advertise Honey, Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to

PEARL CARD CO., Dept. A5,
Clintonville, Conn.

National Membership Dues

Now \$2.00

What this two dollars gets!

One year's subscription to the official organ—The Beekeepers' Review. \$1.00.

Dues in both National and your Affiliated Association. \$1.00.

Mail \$2, no more or no less, to Sec. Wesley Foster, Boulder, Colo., or to your local secretary, or, if more convenient, to this office.

“Safety First”

Use Budd's Aluminum Imbedding Tools

The Soldering Iron or Trolley Wheel

Easy to operate.

Do neat, clean and strong work.

Sanitary: Will not rust, corrode or discolor the wax. The next best thing to Electric current for imbedding the wires in brood frames. Every progressive beekeeper should have one of these up-to-date tools.

Price “2 bits” or 25c. Postage 3c additional.

Gus Dittmer Company

SOLE AGENTS

AUGUSTA

-

WISCONSIN

BUY YOUR QUEENS

from the man who guarantees every one to be purely mated or your queen replaced.

	Before July 1st			After July 1st		
	1	6	12	1	6	12
Untested	\$1.00	\$5.00	\$9.00	\$.75	\$4.00	\$7.00
Select Untested	1.25	6.00	11.00	1.00	5.00	9.00
Tested	1.50	8.00	15.00	1.25	6.00	11.00
Select Tested..	2.00	10.00	18.00	1.50	8.00	15.00
Breeders	5.00			4.00		
1. Comb Nuclei	1.50	8.50				
2. Comb Nuclei	2.50	13.00				

Your choice of either Golden or Leather Colored queens by return mail. Above prices on Nuclei do not include queen. You are to select such queen as you wish with the bees and add the price.

L. MORRISON

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Argenta, Ark.

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SHIPPING CASES, EXTRACTORS, HIVES, ETC., EVERYTHING FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon supplies are made with the greatest care and we feel confident that you will be well pleased with them.

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All goods guaranteed. A trial will convince you.

W. T. FALCONER MFG. CO., Falconer N. Y.

Where the Good Bee-Hives Come From

The Pearce Method of Beekeeping

The new revised **Pearce Method of Beekeeping** is just from the press, and is being mailed promptly upon receipt of orders. The new edition had 56 pages and cover, the size of the REVIEW and the price is 50c postpaid to any address. Remember we club the Pearce Method of Beekeeping with a year's subscription to the Review for only \$1.10 postpaid. To secure this low clubbing rate, address all orders to

The Beekeepers' Review, Northstar, Michigan

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In the Province of Ontario alone there are 11,000 persons producing honey. A very conservative calculation means that there are 50,000 Queens. If you have Queens to sell the Canadian Beemen, say so in *The Canadian Horticulturist and Beekeeper*, the only bee publication in Canada. It is the official organ of the Ontario and New Brunswick Beekeepers' Associations.

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A Popular Paper at a Popular Price

Devoted to the selling end of the honey business. Will give the best and latest methods of selling honey. Just the thing to increase your sales and profits. "Every number is a good number." You should not miss one. 25c for a whole year's subscription, Clubs of 5—\$1.00.

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J. J. WILDER, Cordele, Ga.

The Pearce Method of Beekeeping

I am rewriting, revising and enlarging the Pearce Method of Beekeeping. It was my intention to have it put out by the first of March, but owing to a spell of sickness it was delayed, but will be out on or before the first of May. Order now! The price, 50c, will be the same as the first edition.

Address J. A. PEARCE, Route 1, Grand Rapids, Mich.

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
1/2 gallon can, including mailing case, per crate of 100.....	9.00
1/4 gallon can, including mailing case, per crate of 100.....	7.50
1/2 gallon square round cornered syrup cans, 1 3/4 in. screw cap, per crate of 100.....	5.50
1/4 gallon square round cornered syrup cans, 1 3/8 in. screw cap, per crate of 100.....	4.00

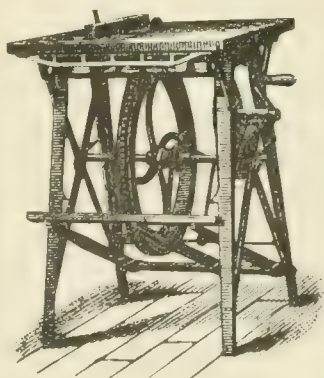
We cannot furnish less than a full crate of the above at any price.

If you can use 500 of either of the two last numbers, deduct \$5 from the gross amount of your order. To illustrate:

Should you order 500 quart cans and cases at \$7.50 the amount would be \$37.50 less \$5.00 or \$32.50 net.

Address all orders to the

THE BEEKEEPERS' REVIEW
Northstar, Michigan



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Beekeepers will save money using our Foot Power

SAWS

in making their hives, sections and boxes. Machine on trial. SEND FOR OUR CATALOGUE

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Got good results from the advertisement I ran in last season's Journals.

D. G. LITTLE, Hartley, Iowa.

We have advertised in the American Bee Journal for thirty years. Have always found it a good advertising medium.

J. W. K. SHAW CO., Loreauville, La.

My advertisement brought all the Orders I wished for. In fact, more than I was able to supply. Quite a number of orders had to be returned.

J. A. SIMMONS, Sabinal, Texas.

The American Bee Journal is a good medium for advertisements. We have had all the Orders booked we could fill.

GOLDEN RULE BEE CO., Rialto, Calif.

The Reasons are self evident—a good bee paper is taken by live and wide awake beekeepers and these are the kind that are always in the market for good bees and good queens.

Rates on space are not high. Display at 15 cents a line or \$2.10 per inch. Classified 15 cents a line.

Send in your order with copy today and get rid of your surplus queens.

AMERICAN BEE JOURNAL
HAMILTON, ILLINOIS

Have Your Old Combs

CAPPINGS OR SLUMGUM

Rendered by our

High Pressure Steam Wax Presses

Dadant & Sons,
Hamilton, Ill.

Dear Sirs:

I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Our outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

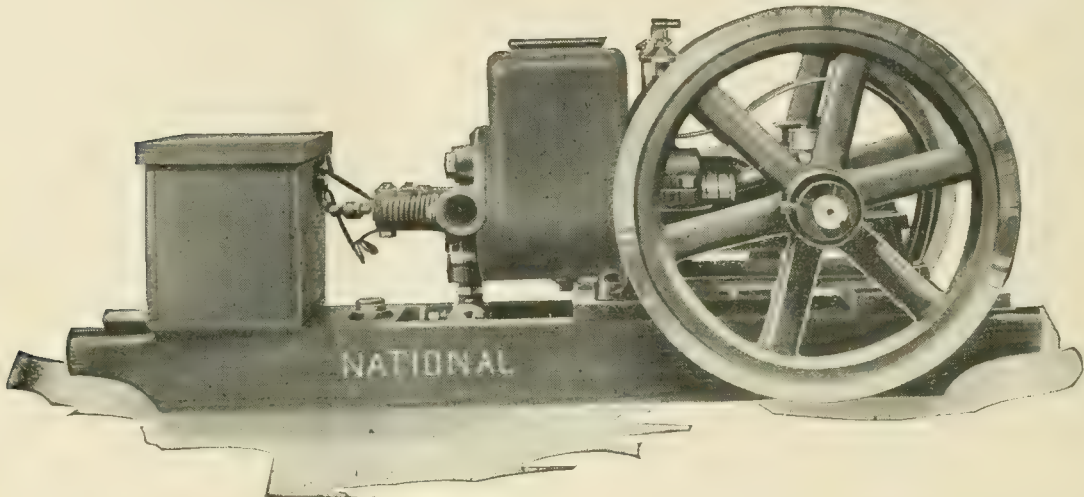
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Just Now We Offer Attractive Terms on Best Quality
BEE SUPPLIES—Send a list of what you need

DADANT & SONS

Hamilton, Illinois

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends

on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard rollers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncased and supplied with fuel and lubricating oil.

Horse power, 1½; bore, 3¾; stroke, 4½; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, 1¼; floor space, 9x36; shipping weight 200.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to The Beekeepers' Review, Northstar, Michigan.

Tin Containers for Honey from New Orleans, La.

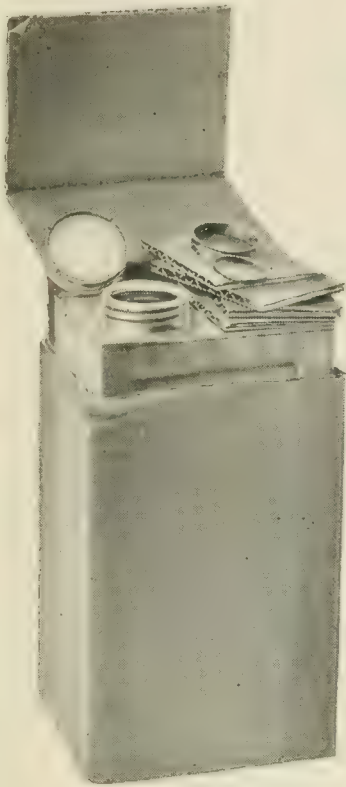
We have made arrangements so we can ship Tin containers for honey from New Orleans, La. to supply our Southern and West Indies trade: we quote as follows:

Friction Top Pails and Cans				
Approx. Capacity	Per 100 In 50 Lots	Per 100 In 100 Lots	Per 100 In 500 Lots	Per 1000 In 1000 Lots
3 lb. Cans		\$3.15	\$2.00	\$29.50
5 lb. Pails	\$5.25	5.00	4.75	45.00
10 lb. Pails	7.35	6.85	6.60	63.00
5 Gallon Square Honey Cans, 1¾ in. Screw				
50 in one large crate, per crate				\$11.00
1 in a case, per case				33½
2 in a case with partition, price per case				63
5 Gallon Cans With 8 in. Screw Caps				
1 in a case, per case				40
2 in a case, with partition, per case				73½

Texas customers furnished from Detroit, Mich

THE BEEKEEPERS' REVIEW, Northstar, Michigan

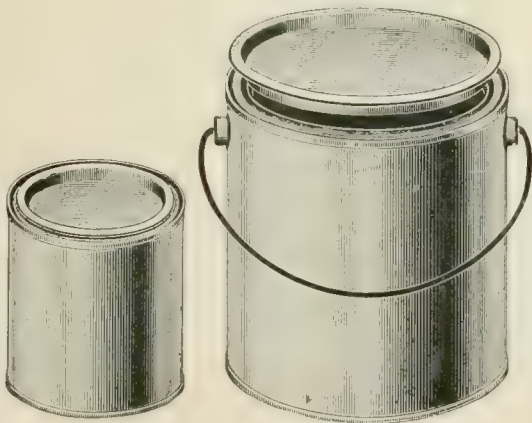
Canco Honey Cans and Pails



PATENTED

Parcel Post Honey Package, oblong can with slotted screw, record seal and rubber gasket. Individual corrugated cartons. 6 lb. and 12 lb. sizes only.

Spencer Friction Top Cans and Pails

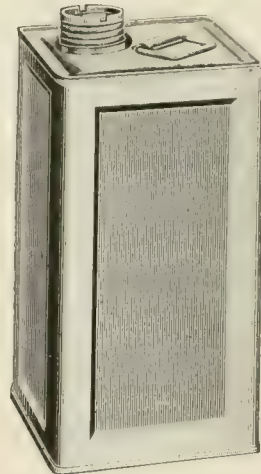


PATENTED

In sizes holding approximately 2 lbs., 2½ lbs., 3 lbs., 5 and 10 lbs.

Write for prices.

PATENTED



1 GALLON SQUARE



60 Pound Square

One and two in case.

American Can Co.

New York
147 West 14th St. Chicago
Monroe Bldg.



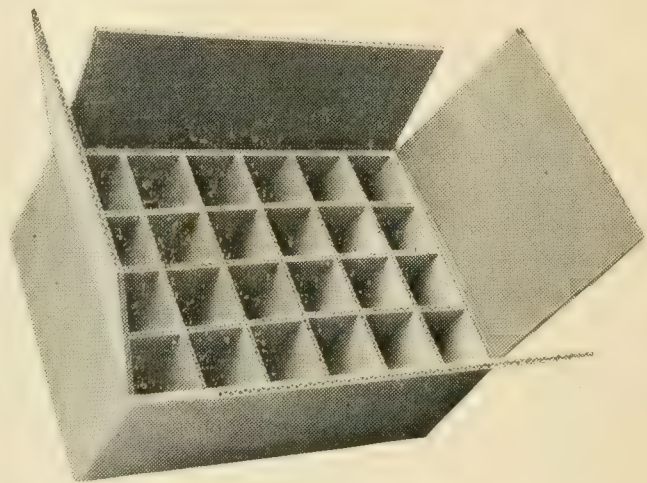
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Are used and highly recommended by the most progressive shippers. Their strength and lightness are wonderful. Shipped folded flat.

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Dirt-proof
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Ohio

TIN CONTAINERS FOR HONEY

FRICION TOP PAILS



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	\$2.25	\$2.15	\$20.00
2½ lb. Can	2.75	2.60	24.00
3 lb. Can	3.00	2.85	28.00
5 lb. Pail	\$5	4.75	42.50
10 lb. Pail	7	6.50	60.00
12 lb. Pail	7.25	6.75	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans	.....	.71 per case
12 pails in a case, 5 lb. Pails	.....	.65 per case
12 pails in a case, 6 lb. Pails	.....	.70 per case
6 pails in a case, 10 lb. Pails	.....	.49 per case
6 pails in a case, 12 lb. Pails	.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1¼ INCH SCREW

1 in a case, price	.....	\$ .33 per case
2 in a case, price	.....	.60 per case
2 in a case in lots of 250 cases, price	.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price	.....	58.50 per 100 cases
50 in a crate, price	.....	\$10.50 per crate

Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.

ONE GALLON SQUARE SYRUP CAN, WITH 1¼ IN. SCREW CAP

6 in a wooden re-shipping case @	.....	.60c per case
10 in a wooden re-shipping case @	.....	.95c per case
50 in one large crate	.....	\$3.63 per crate
½ gallon square syrup cans, 1¼ in. screw cap, per crate of 100	..	\$5.50
¼ gallon square syrup cans, 1½ in. screw cap, per crate of 100	..	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to Review Subscribers cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

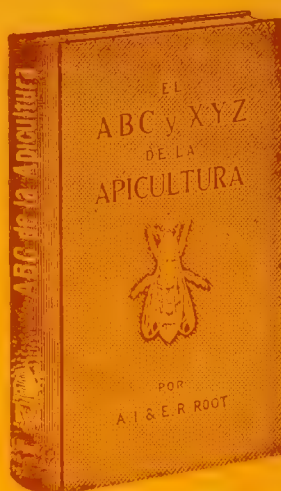
Address

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

The Authoritative Manual on
Apiculture

The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good textbook on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This latest edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides a large amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in *Gleanings in Bee Culture*, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



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The A. I. ROOT COMPANY

MEDINA, OHIO, U.S.A.



The Bee-keepers' Review

Published Monthly



SEPT.
1915



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Are made right in the timber country, and we have the best facilities for shipping: **DIRECT, QUICK and LOW RATES.**

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping cases are dandies.

Ask for catalogue of Supplies free.

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**Beekeepers'
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Perfect sections from young, white basswood, White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

Guarantee:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

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'Our Very Best is THE Very Best' BEE SUPPLIES

BEST SECTIONS.

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BEST OF ALL SUPPLIES.

BEST PRICES you will get for your honey when put up in our sections and shipping cases.

"LOTZ" sections and shipping cases have stood the test. **WHY?** Because they are perfect in workmanship, quality and material. Buy Lotz goods when you want the best. Our 1915 catalogue ready January 15th, send your name and get one.

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ST. ANNE, ILLINOIS

Carries a full line of our goods

AUG. LOTZ CO.
BOYD, WIS.

FOR HONEY

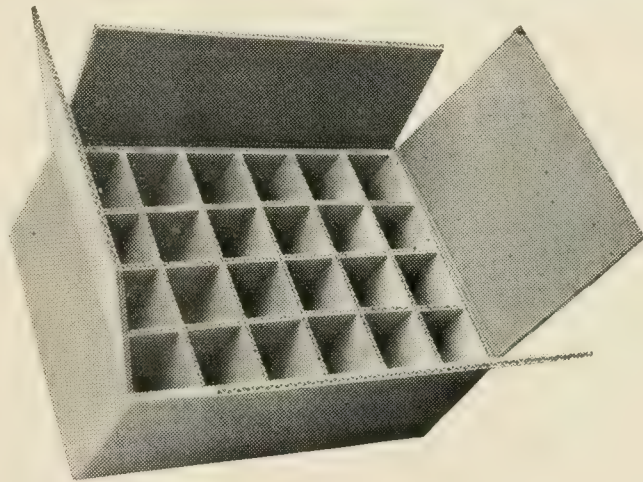


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Are used and highly recommended by the most progressive shippers. Their strength and lightness are wonderful. Shipped folded flat.

They are—

Economical
Convenient
Compact
Damp-proof
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Pilfering



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Canadian Trade
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Ohio

More Money for Your Honey

WHEN PACKED IN

Lewis Superb Shipping Cases

After you have harvested a nice lot of comb honey do not make a serious mistake by putting it up ready for the market in a cheap appearing case such as a home-made one or that turned out by a local planing mill. The best and most economical (taking the sale of the honey into consideration) case must be turned out with the same careful workmanship and with the same selection of proper material as goes into the making of first class bee hives and honey sections such as we manufacture.

It is an acknowledged fact that comb honey put up in attractive Lewis Shipping cases will bring from one to two cents per pound more than the same honey put up in poor cases. Do not cheapen your product by inferior cases. You can afford the best—remember your shipping cases are the show windows for your goods. Your honey will bring more money if well displayed.

INSIST ON THE LEWIS MAKE

LEWIS SHIPPING CASES are cut accurately out of clear, sound basswood lumber. All of these cases are neatly packed and include the proper size nails for nailing them up.

G. B. LEWIS COMPANY

SOLE MANUFACTURERS

WATERTOWN, WISCONSIN

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CALIFORNIA.....	W. A. Trickey.....	Bishop
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ENGLAND.....	E. H. Taylor.....	Welwyn

The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE

NATIONAL BEEKEEPERS' ASSOCIATION INC.

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo.

PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9, 1913, at the postoffice at Northstar, Michigan, under the act of March 3, 1879,

TERMS—\$1.00 a year to subscribers in the United States, Canada, Cuba, Mexico, Hawaiian Islands, Porto Rico, Phillipine Islands, and Shanghai, China. To all other countries the rate is \$1.24.

DISCONTINUANCES—Notice will be given at expiration of subscription. Subscribers are urged, if unable to make payment at once after expiration, to notify us when they can do so. Anyone wishing his subscription **discontinued** should so advise upon receipt of expiration notice otherwise it will be assumed that he wishes **THE REVIEW** continued and will pay for it soon.

Advertising rates on application.

Forms close 20th of each month.

VOL. XXVIII NORTHSTAR, MICHIGAN, SEPTEMBER 1, NO. 9

Sell Your Comb Honey by the Case

Comb honey graded for heft according to the interstate commerce rulings will be in shape to sell by the case and section to a good advantage. The cases of a certain grade will all weigh approximately the same, as will each section of the case. It is customary for the jobber to sell to the grocer by the case and the grocer to the consumer by the section. Why not the producer sell by the case also? We think it is invariably the rule that the jobber will ask for your price by the pound, and by so buying, is in hopes of securing a better bargain. Were we still producing comb honey, we would quote it something as follows: Number One white clover, 4¼ in. sections, weighing lot less than 13½ ounces each @ say 18c per section. It is cased in 24 section cases and recrated in carriers holding eight cases for shipment. The above price would be \$4.32 per case for Number One clover, which should be secured this year, with fancy at a cent or two per section advance over the number one grade. Try this way of selling your comb honey this year and take my word for it you will be pleased with the results.

The Comb Honey Situation

There is none too much comb honey of the table variety produced during 1915, and the producer has the saying of the price it will bring him if he only takes advantage of the opportunity. Will he do it? We are afraid he will not in many cases, take advantage of the short crop and good times to get the market price for his goods. Remember, the price you sell at does not make much, if any difference in the price it will be sold at from the grocery store, for the dealer knows the scarcity of the comb honey crop and will advance the price as soon as he gets it into his hands. Try this year to realize more for your crop of Number One and Fancy comb honey than in the past. You can if you do a little "hustling." Others do it, why not you?

Likely, a rubber stamp is as good as anything for stamping the net weight upon individual sections. The A. I. Root Co., Medina, Ohio are offering one that seems to answer the purpose very well and the beauty of it is only costs 50c for a pad and three rubber stamps. The three stamps read as follows: "Net weight not less than 12½ ounces," "Net weight not less than 11 ounces," "Net weight not less than 10 ounces." The above with a set of small spring scales completes the outfit. Order direct of the A. I. Root Co., Medina, Ohio.

The Sale of Honey

The sale of our crop of extracted honey is of paramount consideration at this time. That is, if one wants to get a good living price for his product and it behooves us all to consider the proposition well before disposing of our crop. You will (if you have "gumption" enough to let the buyers know you have something to sell) have offers and offers, for your product. Many of those offers will not be satisfactory, still (?) we are afraid some will accept a small offer, because they are offered their money by next mail after the honey arrives. This is fine in itself, but after all, does not swell the bank account satisfactorily. If you want to sell your extracted honey in 60 lb cans, advertise it in some of the bee journals. As nearly all honey buyers take some of the bee papers, you can reach a goodly number of buyers in that way. This is the way we sell the product of more than a thousand colonies each season, at prices 25 per cent higher than the jobbers are willing to pay for table honey. This 25 per cent additional on your crop may spell the difference be-

tween profit and loss in the production of your crop. Do not sell to the jobber—wholesale your crop.

The Honey Crop Condition to Date

Continued cool weather coupled with an abundance of rains has continued the clover flow in the northern tier of states until in some favored locations a full or normal crop of honey has been secured. As there has not been too much of the better grades of honey produced in years, this small addition to the short crop should not make any difference in the price of table honey this year.

The Marking of Comb Honey For Interstate Shipment

If honey is shipped outside your state the net weight **MUST** be stamped on each section. This net weight is what **honey** the section contains, **BUT NOT THE WOOD**. It is customary to allow an ounce for the section when weighing, each section being weighed separately. While we have had no experience in weighing and grading under the new regulations, it is presumed there will be but one grade, or heft of fancy comb. Two grades, or hefts of number one, and three grades or hefts of number two. A few sections in each case may weigh less than the stamped net weight, but in this event enough sections in the case **MUST** weigh enough more to make up what the short weight sections lack.

In other words, the net weight of the case must be the same, or more, than the aggregate or individual sections.

The Price to Ask for Extracted Honey When Sold Direct to the Consumer

Our increasing orders for five and ten pound friction top pails, convinces us that more and more producers are awakening to the fact that there are great possibilities in selling their better grades of extracted honey direct to the consumer and now the question arises—what price should be asked, above the wholesale to pay one for all this extra work and expense of putting up in small packages, then taking valuable time to sell it in small lots, instead of “lump-ing” it to some jobber. For there certainly should be some object if one undertakes this task.

In answer to many inquiries along the line of a suitable price to ask for the better grades of extracted honey in fives and tens, we will mention the minimum price that it would be advisable to start in at, where the expenses are not exorbitant like selling near home, or in locations where the expenses can be kept at a reasonable

rate compared with the amount sold. This price would be 80c each for five pound pails and \$1.25 for ten pound pails. Where expenses are high, as away from home, or perhaps in the city where delivery comes high, this extra expense must be taken care of.

General Correspondence

"Boosters Club"--Honey Candy

EDWARD HASSINGER JR., Greenville, Wisconsin.

It is generally conceded that only ten per cent of the people eat honey. I believe it safe to say that at least fifty per cent of the people eat candy. Good candy sells for from 30 cents to 50 cents per pound. The average candy consumer will pay that price, and not think anything of the price. There is no doubt, but that this same candy consumer would not pay fifteen cents per pound, for the finest kind of honey, without kicking about the price. The reasons are many, and much has been said and printed with reference to, "educating the public to the real food value of honey." It is not necessary to educate the public to eat candy, therefore there must be other reasons. I have some neighbors that don't want the "STICKY STUFF" (honey) around, because everything gets sticky, on the place especially where there are little children. I presume such cases are exceptional. But there must be some way to get to these people to eat honey, as well as the thousands that perhaps have never tasted good honey.

I want to go on record for stating, that when honey can be eaten without a spoon or knife, it will sell itself, and the demand will take care of the supply, and the supply will come to take care of the demand, and make beekeeping as much a business proposition as any other rural pursuit, and last but not least there will be a market for honey all the year round, with a price attached to it. As it is now the producer can get little or no more for his honey when he has a small crop, as when he has a large crop, and a large crop often results in no market; and this is true in a retail way as well as in a wholesale way.

The honey candy should be put up in some form small enough to put into your mouth, same as an ordinary piece of candy, so

that it can be sold for a penny apiece, or a nickel's worth, or by the pound. A candy manufacturer informed me that there is no candy popular today unless there is some chocolate in or on it, and all good chocolate candy is **handmade**, only the very cheapest is machine-made, and that has only a very thin coating of chocolate, and that don't sell.

The candy manufacturer is not anxious to use honey at ten cents to take the place of sugar at five cents a pound or less, unless the price and the demand make up the difference, and that is yet to be proved.

I find candy manufacturers willing to try it; if all beekeepers would make an effort in this direction, we should soon know more about it. If the candy manufacturer should not find it a get rich quick business, why then it could still be carried on by the beekeepers, in a body or as individuals, remember it is all **handmade**.

I have experimented a little with honey candy. Comb honey cut into small squares, and drained on a wire screen, then coated with chocolate is delicious, and then some.

Granulated comb honey could be used in the same way, the wax in either one making a fair sized chew of gum, so here we have candy and gum all in one.

Granulated extracted honey cut into squares, and coated with chocolate is good.

There are chocolate drops made, that have the inside filled with a liquid, I am sure extracted honey could be used in the same way.

A mixture of about two thirds granulated extracted honey, and one third good butter, put up in pound packages, should be a great seller in the winter, it's just like cream.

There may be many other ways to put up, or make honey candy. I believe the proper form to adopt would be the chocolate honey candy, it would sell itself. The reason that good chocolate candy is all handmade is because there is no machine made that will or can handle the liquid chocolate. I have not decided upon the proportions, but a mixture of peanut butter and granulated honey go well together.

A Cheap Serviceable Bee Cellar

ELMER HUTCHINSON, Pioneer, Michigan

In reply to your letter asking what kind of a bee cellar I would build. There are several conditions to consider in building a bee

cellar, whether it is to be a permanent structure to last a lifetime, or perhaps only eight or ten years, or whether one wishes to build as cheaply as possible and still have a cellar that will give good results in wintering while it lasts.

For wintering bees in, my choice every time where there is a dry soil to build in, is a cellar with board sides, a board floor overhead, covered with 14 or 15 inches of sawdust with a good roof overhead, and earth floor. Such a cellar with a few repairs occasionally will last for twelve or fifteen years.

My system of ventilation would be a hole through the floor overhead that could be opened and closed as was needed, and an inside door to the hatchway that could be opened and closed as was needed to control the temperature and give ventilation as needed.

As to a cement floor being better to clean up the dead bees on, I very seldom ever have enough dead bees on the cellar bottom that I need to clean them out, until after the bees are carried out in the spring, then I use a shovel to scrape them all up in a pile and wheel them out in a wheelbarrow. It does not matter if you do remove a little of the earth with them.

How I Ship Honey by Parcel Post

C. F. PERRY, South Woodstock, Vt.

I use an open mouth pint jar made of flint glass $5\frac{1}{8}$ inches high and $3\frac{1}{2}$ inches in diameter.

I use four thicknesses of paper to wrap around the jar, say from such papers as Green's Fruit Grower which would make four sheets $10\frac{3}{4} \times 15\frac{1}{4}$ roll around jar so paper will be about $2\frac{5}{8}$ inches beyond each end of the jar. Now double the paper over the ends of the jar making about four folds as you would in doing up a box. Don't try to do a smooth job as you want these folds of paper to act as a spring. Wind a string around and tie so as to hold paper in place.

The Box

The ends are of $\frac{3}{8}$ inch stock 5 inches long and $5\frac{1}{2}$ inches high. The sides are of 3-16 inch stock $6\frac{1}{2}$ inches long and $5\frac{1}{2}$ inches high, top and bottom are same stock $6\frac{1}{2}$ inches long and $5\frac{3}{8}$ inches wide. When nailed up this makes a box $5\frac{1}{2}$ inches deep, 5 inches wide and $5\frac{3}{4}$ inches long inside.

To Pack

Put an inch and a half of straw in bottom of box, lay in jar

and fill in with straw all you can get in and nail the top on. You will have a spring bed all around the jar. Do not try paper or shavings in place of straw; a box of straw will stand a lot of smashing before it will lose its springiness.

The jars I use are made by Smalley, Kivlan & Onthank, Boston, Mass., and are a very nice jar. Please give this package a trial, keeping about the same ratio between your jar and box as I use and I think you will have no trouble.

Sweet Clover for Stock Feeding

EARL F. TOWNSEND, Milford, Michigan

A Comparison to Corn Fodder When Fed Milch Cows

I have had some personal experience with Sweet Clover this fall and I now know that stock will eat and relish it. One of my neighbors told me that his horse would now leave a mess of oats any time for Sweet Clover although at first refusing it and this neighbor is a feed dealer, so naturally his horse would be well fed. Our Jersey cow at first refused it but gradually began to eat it and when I was about out of it I found she preferred it to corn fodder and I also discovered that **when fed corn fodder after being on Sweet Clover hay she dropped about 3 quarts per day off her milk**, just think what this means. 6 pounds per day for 300 days, the average milking period, equals 1800 pounds of milk at 6 cents per quart \$108.00 more per year per cow, or at \$1.75 per 100 which is what farmers get in shipping to the city, it would amount to \$63.00 and this astonishing amount just being the difference in favor of Sweet Clover hay over corn fodder, other feeds, grain, being the same and Sweet Clover hay being the equal, ton for ton, of wheat bran in feeding value according to U. S. Department of Agriculture analysis, and while growing Sweet Clover we are greatly enriching our land.

Eat More Honey--Then Keep More Bees

GEORGE W. WILLIAMS, Redkey, Ind.

Honey is the best, most healthful sweet known. Every beekeeper knows this, and the public also knows it in a vague sort of way, but honey actually takes a back seat in amount sold, and price when compared with other sweets in the open market. And why is this? All beekeepers realize that this is not the right condition,

and the remedy has been searched for, and plans for relief tried, but the general conditions are but little improved. The price of honey is too cheap to produce at a profit, compared with the same effort in producing food products.

Why? The reason is simply that other lines are boosted by well planned advertising campaigns, backed by unlimited money, and we find ourselves eating stuff that we would hardly feed to the chickens if the alleged good qualities of it were not dinned in our ears 365 days in the year, so much, indeed, that we find ourselves believing things that we really know that we ought not to believe. In other words, the American public eats what the shrewd advertisers tell it to eat, regardless of its tastes, and does not eat that which is not advertised. I have made a study of advertising, and know this to be the exact truth.

Then why not advertise "HONEY." I speak from my knowledge of the science of publicity, and feel sure that I am right in the position, that if we would spend the money boosting HONEY, that is behind Postum, Karo, or similar high priced articles of low food value, the price of honey would soar to the fifty or sixty cent mark, and possibly higher, and the bees would have to work overtime to supply the demand at that. But we cannot finance a deal of that magnitude in the ordinary way of things, because the parties interested are widely separated, and have small individual interests, although the aggregate is large.

Here in Indiana we considered the matter in all these phases, and decided to try a new plan. We set aside a day and designated it "HONEY DAY," and invited everybody to "Eat a little Honey." Press notices were sent to many papers, and more than 100 of them printed them. Many of them commented editorially. We sent notices to all the wholesale grocers in the state, and many of them pushed the sale of honey in preparation for the day. We had placards printed announcing the day, and asking the public to "EAT A LITTLE HONEY." These did some good, possibly, although they were not used as freely as they should have been.

We spent less than \$40.00, and secured several hundreds of dollars' worth of the best kind of advertising. The papers were willing to print our "stuff," and we moved quite an amount of honey, and would have sold much more if we had had it to sell. This plan could be used in a nation-wide publicity campaign to better advantage than in a local way. The remote producers would be glad to assist the consuming states boost HONEY in this, and many similar ways that an experienced advertising man could use with-

out much outlay. Whatever plan is considered, we have the advantage of any other article of food in the market. We have a dainty and wholesome product of high food value. The papers are ready and willing to give us space to tell about bees and honey without cost, and we can turn our weakness of being widely scattered into the great strength of having our widely scattered people assist in giving a local color to the press matter. We can enlist 20,000 beekeepers and that many working together in a well matured plan, can accomplish more than a whole lot of money could possibly do. It is up to us to get busy and put HONEY where it really belongs, at the head of the list of staple table delicacies.

If I were helping to direct a publicity campaign to boost the sale of honey, I would plan to make everybody talk about bees and honey as near all the time as possible, for it is a well established psychological fact, that if a person talks and thinks about honey, he will eat Honey. Keep this paragraph in your memory, brother beekeepers, and if you are liable to forget, have it printed and hang it up in your honey house as a reminder, for it is the key to all successful selling campaigns, local or otherwise.

Advertising

DR. A. F. BONNEY, Buck Grove, Iowa

The matter of greatest interest to beekeepers today is not new hives, or the revival of the Ancient Rite of Smoke Introduction, or the possibility of breeding bees as one does cattle, but advertising, for that means selling—honey of course, and the time of year to do that is close at hand.

Several good articles on the subject have appeared lately in the bee journals, and two in particular attracted my attention, one in the American Bee Journal for July by Mr. G. E. Bacon, the other by Mr. Edward Hassinger, Jr. in the Beekeeper's Review for July. Mr. Bacon's article is logical, well written and persuasive, but, to my ideas, not quite satisfying. He gives us no positive information in regard to the art of advertising, while his third question, "Where is the money coming from to maintain this campaign?" (Of advertising), is what I have been trying for a long time to pound into the heads of those who are talking about advertising honey. It is embodied in the question: "How much money can we afford to spend to advertise our honey?" His questions: "Whom to reach," and "How to reach them" are self answered. We want to reach people

who will buy honey. However, I do not want to reach a man in Mexico, Alaska, nor Cuba, for transportation would eat up the goods. I must have at least ten cents per pound, net, above everything, for my honey, extracted, and get it by trying to secure twelve cents. I have averaged for the last ton sold, by retail, in 3, 5, 10 and 60 pound containers $11\frac{1}{4}$ cents a pound, and the advertising has not cost me near a cent a pound, while it might have cost that, had I to pay full postage. Wife is postmaster here, and in an office of the fourth class. She gets about 75 per cent of the cancellation as remuneration, so postage on advertising and packages is low, for us. This selling has been at a time of year when honey is a drug on the market, which convinces me that in our selling season a cent a pound should pay for judicious advertising. But will it, the country over? Mr. Townsend writes me that he did not succeed in selling by mail, and I know of others who failed. I do not know what advertising they used.

Ours is a small industry, gentlemen. There are probably not 200 men in the United States who depend on honey production entirely for a living, while the production of honey will not amount to more than \$30,000,000. A little more than twenty-five cents per capita. That is the kernel of the advertising nut that I have been trying to expose to your view. Listen! How much money can we afford to spend on each and every one of the 100,000,000 people in the United States to increase the sale of honey. One cent? That would be \$1,000,000. We must have a profit on our advertising of, say, one cent each, which at once brings the cost of advertising honey **one time** to \$2,000,000.

As Mr. Bacon asks: "Where is the money coming from?" Where?

I have not in this article room to criticise all that is written about advertising honey, nor would it be profitable, but I must object to Mr. Bacon's dictum that "It is not enough to tell the average reader to eat honey, but you must tell him **why** he should eat honey." This, I know from experience may, and does apply to such fake things as breakfast foods, which cost less than a cent a pound and sell for several cents a pound, and contain about as much nutrition as—er—beeswax. The much vaunted Grape Nuts has been tested by the U. S. government, and has a food value of about 56 percent compared with wheat bread, and I am ready to demonstrate that there is not a breakfast food on the market as nutritious as bread and honey.

These things, breakfast foods, must be advertised day in and

out, year after year. Millions of dollars are spent annually, and many multi-millionaires have been created, This is all impossible with honey, utterly and absolutely impossible; therefore, we cannot go into a campaign of "education." Again, people know why they want honey, and would pay no attention to your arguments. This I know to be true, for I have tried it out, keying my ads to test results. You see people do not want honey all the time. It is so very sweet that it is cloying, and with honey on the table all the time it is often neglected for days at a time. I am writing now for beekeepers and honey producers. The laity will probably never see this article, nor would it do any harm if they did, for they know that it is true, and they also know that they could not eat breakfast foods without cream and milk, which like honey, are mighty good without sawdust added.

The orange producers can afford to advertise for they cannot sell otherwise, and they produce dollars' worth of fruit where we produce dimes' worth of honey. They are organized into a cast-iron aggregation, and have practically, a constant supply. Moreover, they advertise to give away silverware for wrappers and a dime. I am going to try that this winter, sure. There can be no comparison between advertising honey and oranges, nor, for that matter, anything else. Manufacturers of alum baking powders, secret medical nostrums, karo dope and some other things can afford to advertise, for the profits are immense, but, let me ask again—how much can we afford to spend in advertising honey. Individually I mean.

As to the "demonstration" method of advertising, it is admitted by advertisers to be one of the very poorest ways, because extremely fugitive and expensive. Moreover, there is not margin of profit enough in honey to do that, unless locally and where the merchant will supply everything but the honey, as mine offered. As the handle of the jug was on his side I declined. It would advertise him more than it would me, or my honey, rather.

There is another thing, which I fear is going to make selling honey by advertising a hard proposition, and that is the high prices we seem to thing it necessary to get, or must provide for at retail. To enrich the middle man? With our product at two and three times the price of cane sugar it is in truth a luxury, and people are loth to buy. If their appetite clamors for honey they will buy, just as they do candy, but I fear it is going to be up-hill work to sell extracted honey at 12 to 20 cents a pound. I cannot help remembering that Eastern buyers have been trying to pick up the California alfalfa honey crop at three and a half cents a pound.

When all is said and done, advertising, like mining, is a gamble. \$10 is put into either for every dollar taken out. Nobody can tell what an "ad" will do until it is tried out. I recall several secret medical preparations which sunk vast sums, and failed.

The more I think about advertising honey the more I feel that it is a local proposition, IF we are to put much money into it. If the advertising is to cost practically nothing we can, of course use it liberally, as a rubber stamp to print on every letter, card and package sent out EAT HONEY, or EAT BONNEY HONEY, or anything else about honey that you choose, so that it is true.

Before I give an account of my advertising adventures I will say to Mr. Hassinger that he is entirely wrong when he states that "Breakfast Cereal" advertising has revolutionized our notions of dietetics, until now it is a generally accepted fact that no breakfast is hygienic or complete that does not begin with a cereal food." I never ate a dish of so-called cereal breakfast food, and never expect to. Because I am so, there are others. The first five persons who came into the postoffice since I began this paragraph do not use them, wife does not, and none of my grown up children use them. Probably not twenty-five percent of the people in the country do use them, but that is a guess.

It is true that advertising is used to create a new want, and therefore I weep, for honey was the first sweet known to man, and the hardest thing advertisers have to do is to create an interest in old things. I will agree to make any man rich who will put up the money to advertise a honey mixture of pure cane sugar syrup and honey, a mixture which will not cloy the appetite and the supply of which can be made practically unlimited. A quarter million dollars will do to begin with. Beekeepers will please not all speak at once.

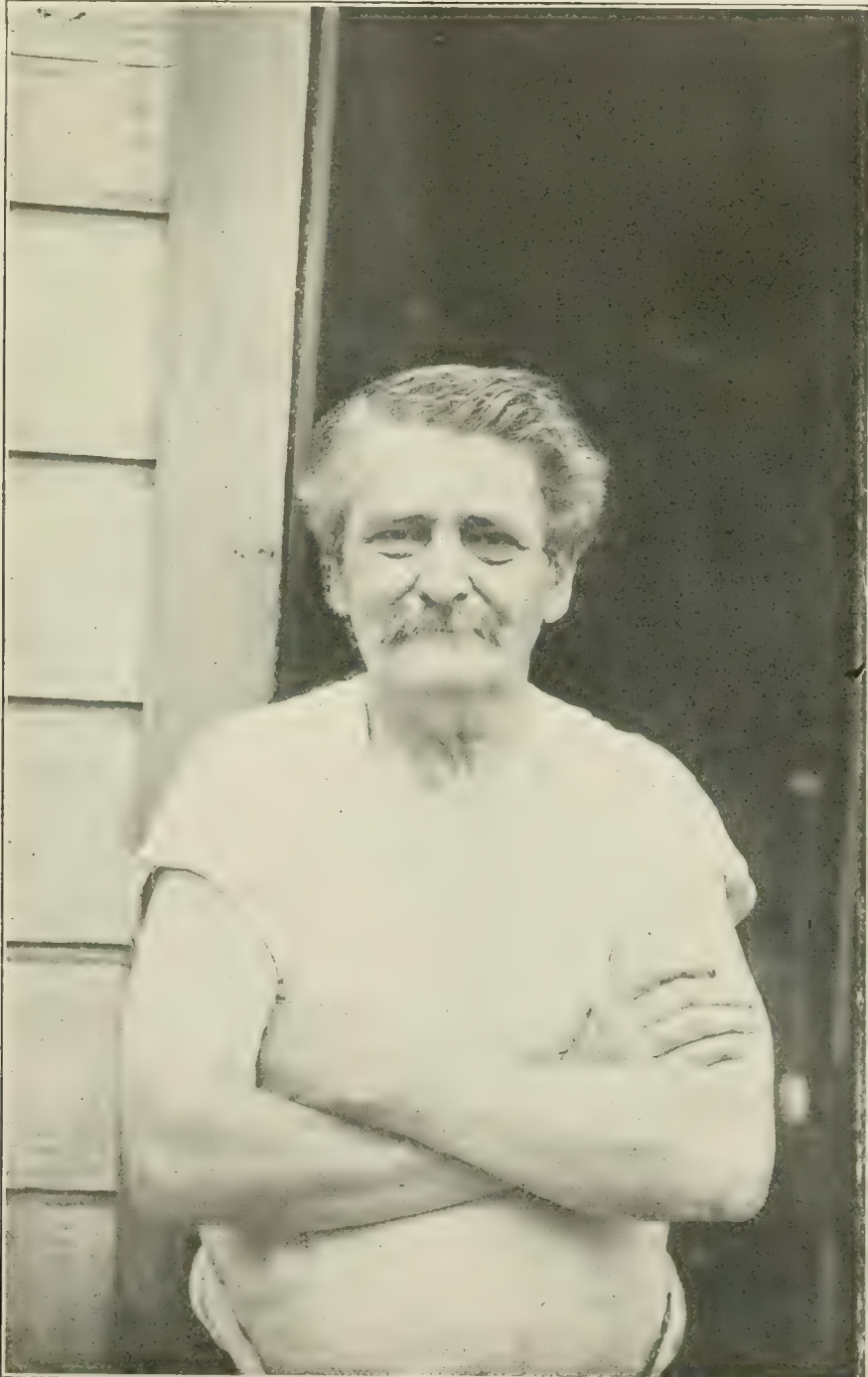
My young friend does not grasp the dominant idea of EAT HONEY. It was invented for WORLD ADVERTISING, nothing more. When it comes to local advertising I made it read EAT BONEY HONEY, only I spell it Bonney. Moreover, he is like the vast majority of advertisers. They want to fill all creation with printed matter and call it an "ad." Of course there is a place for long advertising tales, but not in a legend for world use.

In spite of Mr. Hassinger's lack of experience in advertising, his "ads" are good for strictly home advertising—in big towns. In little, rural communities they would be dead in a week, for everybody would have seen them, so I now confine myself to a sign which reads, HONEY FOR SALE, put EAT BONNEY HONEY stickers

on everything I send out, a sign on my honey house which can be read from a mile away, "Eat HONEY." In a large city it might pay to advertise honey in street cars, but I doubt it, unless it was bought at 3½ cents a pound and sold at 18 or 20.

Mr. Hassinger says: "I am quite sure that nine people out of

**EAT BONNEY
HONEY**



"This picture of myself has proved the best advertisement I ever used, Why? Darned if I know, unless it is because it is so blamed ugly."

ten that eat honey do so for no other reason than simply because they "LIKE IT." Then why advertise it? Will any amount of advertising create an appetite, or make them like it?

Our friend quotes some well know advertising truths, but he also, I think, draws some wrong conclusions, while I admit I may be wrong. I generally am, to hear wife tell it. For instance he says, "Selling or giving honey sandwiches at the fairs no doubt is the real thing." Hum.

Now here is one of my adventures in advertising. I have a lot of movable rubber type, and holders for same, and with them I got up a block to read:

"I will send you a 3-pound can of

B O N N E Y H O N E Y

into first, second and third zones, postpaid, for.....cents

Dr. Bonney, Buck Grove, Iowa.

Using government postal cards I stamped them up by the hundred, putting in the experimental price, while finding out what the advertising would cost. I figured that the cans cost a cent a pound for the honey, the cards $\frac{1}{4}$ cent each, when cancelled, and I wanted 10 cents a pound for my honey. That made a total of $33\frac{1}{4}$ cents for a three pound can. Postage cost me an average of $2\frac{1}{2}$ cents, on 3 and 5 pound cans, which brought it up to $35\frac{3}{4}$ cents on the small size. After selling a large amount, for summer season, I have decided on the following, and am having several thousand cards printed to resemble a post card, in that it has an eagle on one side. On the one side I have EAT BONNEY HONEY, in red, like my little red sticker, and on the other side a block similar to the one outlined. (See page 337.)

On the smaller sizes I get about 11 cents, on the big can close to nine cents. I tried several hundred cards at various prices, and found that these gave best results. At the same time I get the same prices at home, and really sell quite large amounts. This gives me twelve cents the pound, and brings up the average. This is but one of my numerous ventures in advertising, and I shall not be able to judge of it until spring, after a trial during the honey selling season.

I will digress to remark that the "funny" and skeleton post-

I will send you, by mail, postage paid, into first, second and third zones,

A 3-pound can of BONNEY HONEY for 40 cents,

A 5-pound can of BONNEY HONEY for 65 cents,

A 10-pound can of BONNEY HONEY for \$1.25.

I will send to you anywhere on earth, you pay the freight, a 60-pound can of BONNEY HONEY, you pay the freight, for \$5.75.

(Always send money order.)

Dr. A. F. Bonney,
Buck Grove, Iowa.

cards give me entirely satisfactory results—locally. Out of my immediate neighborhood the plain card, as above, seems to get best results, still there are a very large number of persons seem to know BONNEY HONEY in a radius of 100 miles, and there are some people in that territory, believe me.

We may, sometime, learn to advertise honey so as to sell it. In the mean time advertise it. How, and where, and when do not matter so much if you will keep at it all the time, even if there be times when you cannot supply the demand. If by advertising, you sell your honey every season why worry? Let the other man walk.

Now children, you may not believe it, but this picture of myself has proved the best ad I ever used. Why? Darned if I know, unless it is because it is so blamed ugly. Be that as it may: "I saw your picture. Send me a can of BONNEY HONEY," was very common, until I laid it aside to try something else. This goes to show how little we can tell as to what will "pull" in advertising.

Finally, Advertise. Keep eternally at it.

Field Notes From Iowa

J. W. STINE, Stockport

At this date, June 27, we are having another hard rain. This with the great amount of rainfall we have been having this month will mean a continual flow from white clover through next month. Swarming has begun within the last ten days, and the honey flow is very good at present. The linden trees are full of buds and some trees are beginning to blossom, we are hoping for a good flow of honey from this source if the weather conditions are favorable. The

month of May was very unfavorable for the bees. It was very wet and cold and it seems the bees lost nearly what they had gained in April.

* * * *

I had quite a novel and interesting experience with Mr. Hall at
(Concluded on Page 344)

The Italian Bee

That the Italian bee is the best strain or race of bees for honey gathering qualities, gentleness, prolificness and disease resisters, is becoming well known among our scientific beekeepers. The Carniolean, which is of a grey color, would be equal to the Italian if it were not that they are more inclined to swarm and often breed up when there is no honey flow. The writer has tried both the Carniolean and the Caucasian, having imported a Carniolean queen two years ago from upper Carniola, Austria, but is thoroughly convinced that the Golden Italian bee is the best all purpose bee.

While working for the state as deputy bee inspector I had the pleasure of visiting the apiary of Mr. J. I. Danielson, living northwest of Birmingham. After inspecting his bees, which were of a very high grade of Golden Italian, I found they were free from disease. This was in August two years ago. These bees were working the red clover and no other bee but the Italian will do this, which is another point in their favor. These bees are quiet on the comb and will not run off and bunch up as the common black bee will do. Mr. Danielson increased his apiary that season from twelve colonies spring count to eighty in the fall and wintered seventy-eight of them, also took off some surplus honey.

Visiting Mr. Danielson again this spring I saw his Golden Italians, which he is wintering in the cellar. I was very much pleased to find 146 swarms wintering in good shape and as yellow as any bees I have ever seen. His bees were inspected last June by Mr. Elmore, deputy inspector of Jefferson county, and found perfectly healthy.

The last few years, having kept a few colonies of the three races of bees I have mentioned, I am thoroughly convinced that the Italian bee is the best all purpose bee we have. I quite often hear a beekeeper say the moth bothers his bees. I will say I do not remember ever seeing or hearing of a colony of full-blood Italians ever being destroyed by moth. They keep the colony not only healthy but full of bees and will not hesitate to tackle a full grown moth when she comes near the entrance of the hive.

The National Beekeepers' Association Inc. And its Affiliated Associations

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.....Rt. 4, Springfield, Ill.
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IOWA—S. W. Snyder.....Center Point, Ia.
KANSAS—O. A. Keen.....Topeka, Kansas.
LOUISIANA—L. T. Rogers.....
.....Box 316, Shreveport
MASS. SOCIETY OF BEEKEEPERS (East-
ern)—Benjamin P. Sands, 1051 Old S.
Bldg., Boston.
MONTANA—Percy F. Kolb, 134 Broadwater
Ave., Billings.
MICHIGAN—F. E. Millen.....East Lansing

MINNESOTA—F. W. Ray, Minneapolis, Minn.
MISSOURI APICULTURAL SOCIETY
INC.—Austin D. Wolfe.....Parksville.
NEW JERSEY—E. G. Carr.....New Egypt, N. J.
N. CALIFORNIA—Alwin P. Helm.....
.....16, Fair Oaks, Calif.
N. MICHIGAN—Ira D. Bartlett.....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola, Ohio.
OREGON—Floyd E. Smith.....Dallads, Ore.
THE NEW MEXICO BRANCH.....
Henry C. Barron.....Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger.....
.....Liverpool, Pa.
PUERTO RICO—J. W. VanLeenhoff.....
Ponce, Puerto Rico, 11 Marina, Ct.
SOUTH IDAHO AND EAST OREGON
R. D. Bradshaw.....Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—H. E. Graham.....Gause, Texas
VERMONT—P. E. Crane.....Middlebury, Vt.
VINTON BEEKEEPERS' ASS'N.....
E. J. Winder.....Vernal, Utah.
WASHINGTON—S. King Clover, R. No. 1,
Mabton, Wash.
WISCONSIN—Gus Dittmer.....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

If you are a paid-in-advance member of one of the above associations, you are a member of the National Beekeepers' Association in good standing until the end of this fiscal year without additional expense. If you are NOT a member of one of the above associations, you should be. Send \$2.00 to Secretary Wesley Foster, Boulder, Colorado, which will pay for the Beekeepers' Review and your National and local dues for a year. Do it today, waiting is dangerous! If more convenient, the order can come to this office.

Autumn Mating to Control Inheritance in Honey Bees

F. W. L. SLADEN

Apiculturist, Central Experimental Farm, Ottawa, Canada

In the course of some bee-mating Experiments carried out in July and August, 1912, at a mating station on the Kazabuzua Plains forty miles north of Ottawa, Canada, it was found that queens were quickly mated by local drones, although there were no drones at the mating station and no colonies could be discovered within a radius of about three miles of it, at which distance there existed about thirty colonies of black bees containing numerous drones. This result suggested that a radius of at least about four miles is needed to secure isolation for mating purposes. As-

suming that four miles are necessary, an area of fifty square miles would have to be free from bees. In no place except upon a desert or upon a small island four miles from the nearest land could one be sure that no bees existed in so large an area, unless by making a careful search which would be so laborious as to be impracticable, especially as the search would have to be conducted at least as often as once a year to keep track of swarms and introduced bees. Deserts and islands are not available to the vast majority of queen breeders, who indeed prefer regions highly favorable for beekeeping for the purpose of rearing, mating, and testing their queens. Such regions are usually well populated with bees, and the important question arises, is it possible to breed bees by selection, that is to mate the queens with drones from particular colonies in them? Ten years experience in isolating and maintaining the British Golden bee at Ripple, near Dover, England, evolved a system of mating that fairly realised this object there, and two years of breeding experiments under very different conditions in Canada indicate that the same system will probably be even more successful here.

The principle underlying this system is what I have called "selection by color." The bee to be bred is yellow, and the matings are arranged to take place in a region where only black bees occur. In this way the purely mated queens are distinguishable from the mismated ones by the brighter color of the workers they produce. Selection by color is, however, of little value unless means are taken to secure a large percentage of pure matings. These means are four in number:-

(1). Selecting for the mating station a place that is as thinly populated with bees as possible, and has none very near. At Ripple there were no colonies within half a mile: outside this, up to four miles, there were about 250 colonies. At Kazabazua, there were none found within three miles and outside this, up to four miles there were about thirty-six.

(2). Rearing as large a number of drones as possible.

(3). Rearing and mating as many queens as possible late in the season when most of the drones of the neighboring colonies have died.

(4). A climate in which the maximum temperature is seldom above 65 degrees Fahrenheit, without wind, or 70 degrees with a light breeze, compelling the queens to get mated in such weather, which restricts the flight of drones and queens. Restricted mating weather was a feature of the maritime climate of Ripple.

In this paper I wish to call special attention to late mating and restricted mating weather.

The following table gives an analysis of the results of the 1908-1909 matings at Ripple, showing the effects of season and weather at the time of mating on the percentage of pure matings.

Season	Proportion of matings (P) producing over 75 per cent golden workers. Those producing less than 75 per cent are designated "M."			
	Free mating weather, 70° to 75°	Semi restricted mating weather, 65° to 70°	Restricted mating weather, 62° to 65°	Total
July	2 P to 12 M 14 per cent pure	11 P to 42 M 21 per cent pure	16 P to 13 M 55 per cent pure	29 P to 67 M 30 per cent pure
August 1 to 15	6 P to 16 M 27 per cent pure	14 P to 18 M 44 per cent pure	0 P to 1 M 0 per cent pure	20 P to 35 M 36 per cent pure
August 16 to 27		1 P to 2 M 33 per cent pure	10 P to 2 M 83 per cent pure	11 P to 4 M 73 per cent pure
August 28 to Sept. 12			19 P to 2 M 90 per cent pure	19 P to 2 M 90 per cent pure

Ignoring periods in which the figures were too few to be of value, it is seen that there is a steady rise in the percentage of pure matings from 14 per cent in free mating weather in July to 90 per cent in restricted mating weather in the period August 28 to September 12.

To separate pure matings from mismatings, it was assumed that all that produced over 75 per cent of goldens were pure. 76 per cent of the queens classed as mismated produced varying proportions of goldens up to about 70 per cent. It was believed that most of these had been mated by hybrid drones from neighboring colonies that had become more or less hybridised as the result of six or seven years of breeding goldens at Ripple. 57 per cent of the matings classed as pure produced varying proportions of intermediates up to about 20 per cent. Some of these were probably goldens that had been chilled during development.

For further particulars of the Ripple experiments see the British Bee Journal for December 1909.

The inland climate of Kazabazua is characterized by ample heat in summer, and frequent periods of moderate heat occur until quite late in the autumn. Restricted mating weather is therefore not experienced except to some extent in the autumn. This, however,

is probably an advantage, for such weather caused great loss of queens at Ripple.

Kazabazua also differs from Ripple in usually having a fairly heavy honey flow throughout August and up to about September 15. This comes from willow-herb (August), golden-rod (August and September) and aster (September). At Ripple very little nectar was collected in August and September. The longer continued honey-flow at Kazabazua discourages robbing and in this and other ways facilitates safe mating, but it encourages the local black colonies to keep some of their drones alive for a time and even rear a few in August.

A number of the daughters of a non-swarming Italian queen were mated at Kazabazua in the presence of about 4,000 drones bred from the same queen, during a period of clear sky and light southerly to westerly airs extending from October 1 to October 5, 1914, this being about a month later than the latest date that can be relied upon for mating at Ripple. During this period the temperature rose to about 63°, 68°, 72°, 75° and 78° on each successive day, though there were at first sharp frosts at night. The results of these matings will be duly recorded.

It should be mentioned that an apiary of sixteen black colonies in box hives three miles from the Kazabazua mating station was watched for five minutes at 11:40 a. m. on October 4 when yellow drones were flying very freely at the mating station. No drones flew in or out of those hives. On the previous day an apiary of three colonies, also three miles from the mating station, was watched for five minutes at 1:25 p. m. Four black drones were seen to fly in and one out.

For autumn mating the bees need not be brought to the mating station until the end of August. This is a great advantage in that the local black colonies are not likely to have virgins flying so late in the season, so that they are not likely to get crossed with the yellow bees; consequently the same mating station may be used in succeeding autumns without fear that the distinction between pure matings and mismatings will become blurred. By maintaining this clear distinction there is good reason to believe that three-banded Italians as well as goldens can be bred by color selection. Indeed some daughters of a pure imported leather colored Italian queen mated at Kazabazua by local drones in 1913 produced workers distinctly darker than the pure Italians, their sisters. In the writer's mind there is no doubt that, for northern climates, the three-banded Italian is superior to the pure golden.

Ontario National Honey Producers' Association Report of the Secretary for May

The total number of memberships in the Ontario Beekeepers' Association received during the year ending October 31st, 1914, is 1,284, compared with 1,404 last year.

Four hundred and sixty-nine of these members came in from 26 affiliated county associations and the balance of 815 by single subscriptions.

The fact that only 120 members have fallen away in this year of hard times and crop failures is very encouraging, especially in view of the 875 increase a year ago. All those new members would not renew at the end of the first year for reasons of sentiment, but because they are getting their money's worth.

The queen order business was continued during the year. Two hundred and forty-seven members purchased 2,143 queens at an average price of about 70 cents each. This will be continued next year.

The war situation in August brought on a serious menace to the beekeeping industry in Canada owing to the difficulty of securing sugar for winter feeding. The secretary sent a letter to the members of the association advising them to communicate with their representatives in the Dominion Legislature urging some special provision for beekeepers under the circumstances. The subject was debated in the House, and was referred to Sir Geo. E. Foster, Minister of Trade and Commerce, who wrote to the secretary asking for a statement of the beekeepers' needs. A second letter was then sent out to the members and about 100 replied stating a total requirement of about 48,000 pounds of sugar for winter feeding. The addresses of those making application were sent to Sir Geo. E. Foster, with a statement of their requirements. He very kindly sent these lists on to the sugar refiners, who in turn sent them to their local agents throughout Ontario, instructing them to see that bonafide beekeepers were supplied with plenty of sugar at wholesale rates.

Acting as Provincial Apiarist, the secretary took a spring report on beekeeping, sending blank forms to a large number of Ontario beekeepers the latter part of April. One thousand one hundred and fifty replies were received reporting 38,222 colonies, spring count. The average winter loss was only seven and one-half per cent, and prospects for a honey crop very bright. The reports taken later, however, showed almost a total failure of the honey crop.

MORLEY PETTIT, Secretary-Treasurer.

Field Notes From Iowa

(Continued from page 338)

Colo last week. He took me to three of his out apiaries and we went through all the bees in two of these and found the most of the colonies in good shape, some preparing to swarm and nearly all starting well in the supers. Mr. Hall has the management of his six apiaries down to a fine point and with the honey flow as good as it is at present he should have a good crop this year.

The date of the Tri-state summer meeting at Hamilton is changed from August to the 7th of September to be held in connection with an inspectors' conference at Keokuk the 8th. This will make a double incentive for the beekeepers to attend. There are to be several noted beekeepers from different parts of the U. S. and Canada. Among them are: Dr. Phillips, Prof. Sladen of Canada, Inspectors France of Wisconsin and Millen of Michigan and it is hoped to have Dr. Miller and Mr. A. I. Root present to speak at the meeting. An evening meeting will probably be planned for on the 7th.

The Pennsylvania State Beekeepers' Field Meet Saturday, September 11th

The Pennsylvania State Beekeepers will hold a field meet in the apiary of Chas. C. Wright, Aldan, Delaware Co., near Philadelphia on Saturday, Sept. 11th beginning at 10 a. m. Demonstrations and talks will be given by prominent beemen. An interesting program is prepared. Everybody is invited. Take cars in Philadelphia to 69th St. terminal, change to Collingdale and get off at Aldan.

H. C. KLINGER, Sec'y,
Liverpool, Pa.

DR. H. A. SURFACE, Pres.,
Harrisburg, Pa.

Bee Meetings Next Fall

Some time ago a committee was appointed to arrange the dates of next winter's conventions on the circuit plan as far as possible. Several months have been required to arrange the dates to the satisfaction of all concerned. The States joining in the circuit and the dates on which conventions will be held are as follows:

- | | |
|-------------------------|--------------------------------------|
| 1. Ohio Nov. 26-27. | 7. Indiana Dec. 10-11. |
| 2. Illinois Nov. 29-30. | 8. Iowa Dec. 13, 14, 15. |
| 3. Kansas Dec. 1-2. | 9. Michigan Dec. 15-16. |
| 4. Missouri Dec. 3-4. | 10. Chicago-Northwestern Dec. 17-18. |
| 5. Minnesota Dec. 7-8. | |
| 6. Wisconsin Dec. 9-10. | |

From the above dates it will be seen that conventions will be in session continuously excepting Sundays. By this plan, speakers of prominence will be able to attend a number of conventions without inconvenience. If the dates could have been conveniently arranged, less travel would have been necessary by having adjoining States follow each other. Some dates were fixed and the other meetings had to be adjusted to them. It is to be hoped that

the circuit plan will prove so popular that somewhat more convenient arrangements may be possible another year. The location of the various State conventions will be announced by their respective secretaries. Some locations have apparently not yet been selected.

FRANK C. PELLETT.

ONTARIO BEEKEEPERS' ASSOCIATION 1915 WHITE HONEY CROP REPORT COMMITTEE MEETS

Average of 55 lbs. per Colony. Quality Excellent, brisk demand at slightly lower prices.

The Crop Report Committee of the Ontario Beekeepers' Association met on Wednesday, August 4th. Three hundred members reported from all parts of Ontario showing an average of 55 pounds per colony. There is about an average crop, and the quality is excellent. The buying power of the public is below the average, however, and it is likely that prices will range slightly lower than those recommended by the committee last year. In fact, some honey has already changed hands at prices recommended below.

Selling should be brisk at these prices as the market is clear of old honey and the high price of sugar is causing householders to turn to honey as a substitute for canned fruit; considering that it requires no preserving but can be stored in a dry place regardless of temperature without even removing it from the tin. One case was reported where berries were allowed to waste and 60 pounds of honey purchased to save the expense of picking and canning the berries.

The prices recommended by the Committee are as follows:

No. 1 Light Extracted, wholesale, 10c to 11½ per lb.

No. 1 Light Extracted, retail, 12½ to 15c per lb.

No. 1, Comb, wholesale, \$2.00 to \$2.75 per dozen.

No. 2 Comb Wholesale, \$1.50 to \$2.00 per dozen.

These prices are f. o. b. in 60 lb., 10 lb and 5 lb tins; the former being net weight with the tin thrown in, the two latter being gross weight. The difference in time and trouble of filling the small tins about equalizes the price. In selling to the wholesale merchant the lowest wholesale price should be asked; while the retail grocer should pay the highest wholesale price. The retail price to the consumer might vary according to the quantity he takes in any one purchase and whether he supplies his own package.

Signed by the Committee.

Wm. Couse,
H. G. Sibbald,
W. J. Craig,
Morley Pettit, Sec.-Treas.

Valparaiso, Ind., July 29, 1915
The Beekeepers' Review,
Northstar, Mich.

The 1915 crop is on the hives yet but I expect to commence extracting next week. So far we have about half a crop. We had enough White Clover for a record crop but it has been raining about half the time since May 1st., and still at it. If the weather will allow we should have a big fall crop. I wintered 66 colonies in clamps last winter with the best of success.

Yours Truly,
JOHN C. BULL
Valparaiso, Ind., R. F. D. 8.

Field Meeting

The New Jersey Beekeepers' Association will hold a Field meeting in the apiary of R. D. Barclay, Riverton, N. J. on Sept. 16th, 1915 when live topics will be discussed.

C. H. ROOT, President,
E. G. CARR, Sec'y-Treas.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

J. C. Wheeler, 921 Austin Boul., Oak Park, Ill.

Hoffman & Hauck, Woodhaven, N. Y.
H. H. Thale, Maywood, Mo.

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each has for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Robert E. Foster, Rifle, Colorado, 200 to 500 colonies.

Frank Willmert, Elmore, Minn.

THE BEEKEEPERS' REVIEW
THE BEEMAN'S OWN
PAPER--DO YOU PATRONIZE
IT AS YOU SHOULD?

Queens of MOORE'S Strain of Italians

PRODUCE WORKERS

That fill the supers quick
With honey nice and thick.

They have won a world-wide reputation for honey gathering, hardiness, gentleness, etc.

Untested queens, \$1.00; six, \$5.00; 12, \$9.00.

Select untested, \$1.25; six, \$6.00; 12, \$11.00.

Safe arrival and satisfaction guaranteed.
Circular free.

I am now filling orders by return mail.

J. P. MOORE,
Queen-breeder. Route 1, Morgan, Ky.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. PEARL CARD CO., Clintonville, Conn.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Extracted honey, send sample and price in large and small lots. FLOYD MINICK, Cochranville, Pa.

WANTED—Choice grades comb and extracted honey. Send sample and state quality, how packed and the lowest price. H. H. THALE, Maywood, Missouri.

FOR SALE—Light extracted honey 8c Amber 7c., half cent less, in ten case lots, two 60 pound cans to case. H. G. QUIRIN, Bellevue, O.

WANTED—A car or less of White Clover, Raspberry and Basswood extracted honey, in 60 lb. cans. Also glassed comb honey. I. J. STRINGHAM, 105 Park Place, N. Y.

FOR SALE—Ten cases of two 60 lb net cans of beautiful white clover extracted honey, at 10c per pound. New cans and cases. Sample free. Address RAY C. AUSTIN, Ashley, Mich.

FOR SALE—Fancy sweet clover extracted honey in cases of 120 lb net at 7c per pound. In cases of 12-5 lb friction top buckets (pails) @ only \$5.00 per case. 60 lb net. Send cash. VIRGIL WEAVER, Falmouth, Ky. tf

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

FOR SALE—Finest quality water white sweet clover extracted honey, two 60 lb. can cases, at only 7c per pound. Also Fancy white comb honey at \$3.00 per case of 24 sections; crated, 9 cases to crate for shipment. Prices F. O. B. here. JOE C. WEAVER, Cochrane, Ala. tf

FOR SALE—20 colonies of bees in 8-frame hives with one extracting super each; seven extra hive bodies; 5 covers; six bottoms; 35 comb honey supers, 5 $\frac{3}{8}$ in. deep; one complete hive with frames, fences and starters; one 2-frame extractor; 3 bee escapes with boards; 7-11 honey boards. Must be sold before September 25th. All at a bargain of \$75.00 FLOYD MINICK, Cochranville, Pa.

FOR SALE—Fine quality Clover-Basswood blend of extracted honey; left upon the hives to "cure" until the first of August before extracting, then put into new 60 lb net tin cans, two in a case for shipment. A very superior article. For prices and sample write O. H. SCHMIDT, R. No. 5, Bay City, Michigan.

FOR SALE—Twenty-two cases, two 60lb net cans to the case, of amber extracted honey at only 6 $\frac{1}{2}$ c per pound on car in Pa. This is a shipment of Texas amber honey, rather better for baking purposes than table use, still some may be able to use it for the latter. The Review has taken over this bunch of honey in settling up an account for one of our subscribers. We can furnish a small sample from this office to intending purchasers. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

CHAS. ISRAEL BROS. CO.

486 Canal St., New York

COMMISSION MERCHANTS

Dealers in Honey, Beeswax, etc.

We get you the Best Market Price for your Produce. Write us for further Particulars.

Los Angeles Honey Co.

633 Central Bldg., Los Angeles, Calif.

Buyers and Sellers

OF

HONEY AND WAX

Write us for prices when you are in the market

FOR SALE—A carload of white clover extracted honey, in new 60 lb net tin cans, two in a case for shipment at only 8c per pound, on track. This crop of honey is in New York state, and if a sale of the entire crop can be made to one purchaser, a liberal reduction will be made. For further particulars and sample, address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

CHICAGO—Shipments of comb honey are arriving quite freely and are meeting with good demand. Sales so far have been at from 17c to 18c per lb. for the No. 1 to fancy grades. Very little amber is offered but what has been, has sold at 13c to 15c per lb. according to color and kind. The quality of the honey is most excellent and we look for a free consumption.

Extracted is also arriving freely. As yet, the demand is very meager. Some lots have not been properly ripened, but the majority of it is of fine quality. Prices for white are ranging from 7c to 9c per lb. with the ambers from 5c to 7c per lb. depending upon the kind, flavor and quality.

Beeswax is steady at from 30c to 32c per lb. according to color and cleanliness. August 16th, 1915.

R. A. BURNETT & CO.,
173 W. South Water Street.

BEEES AND QUEENS

BEEES FOR SALE—100 colonies. J. H. STONEMAN, Box 264, Blackfoot, Ida.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

FOR SALE—My complete apiary of 65 swarms of bees and crop of honey. Want to sell everything as am going to move away. A. N. FRALICK, Homer, Minn.

MY GOLDEN ITALIAN QUEENS are extra fine. One untested \$1.00, tested \$1.50. Extra select tested \$2.00. No disease in neighborhood. F. M. ALLEY, 697 N. Cottage St., Salem, Ore.

WE WILL be in the field with good Italian Queens in June at \$1 each, 6 for \$5. Also 2 pr. Nuclei in June at \$2.50 each without queen. Where queen is wanted add one dollar. D. J. BLOCHER, Pearl City, Ill.

FOR SALE—170 colonies of bees equipped for extracting in 2 apiaries 1 mile apart, in an Alfalfa belt three miles from Fallon, Nev., in the heart of the Carson-Truckee, U. S. Government Reclamation project, for particulars address GILLMAN H. WRIGHT, R. F. D. No. 1, Fallon, Nev.

ITALIAN QUEENS—From Northern bred hardy, guaranteed hustlers for honey. Bees per lb. Apiaries under state inspection. Descriptive list free. Leaflets, "How to Introduce Queens" 15c. "How to Increase," 15c, both 25c. Untested queen 75c. Sel. tested \$1.50. E. E. MOTT, Glenwood, Mich

GOLDEN or Three-banded Italian Queens ready the first of April.

Tested Queens, each	\$1.00
6 or more, each .....	.85
Untested, each .....	.75
6 or more, each .....	.65

Special prices on long orders. Everything guaranteed. I. N. BANKSTON, Buffalo, Texas. tf

BEST THREE BANDED ITALIAN QUEENS—June to October, mothers selected from more than 100 colonies and reared in hives running over with bees, according to the latest scientific methods. Every queen a dandy. Satisfaction guaranteed. Each, 75 cents. Per doz. \$7.20. Per hundred \$50.00. Also Bees and Honey J H. HAUGHEY, Berrien Springs, Mich.

FOR SALE—My entire extracting outfit consisting of 160 Col. bees, 10 frame hives fine condition, 30 new 10 fr. hives, 200 new 10-frame 5 $\frac{3}{4}$ in. depth supers nailed and painted (220-10 fr. 40- 8 fr. ext. sup. 5 $\frac{3}{4}$ depth 50-10 fr. 10-8 fr. ext. H. bodies filled with combs) and numerous other things, 40 acres improved land in famous Snake River Valley. Great bargain Address Wm. McKIBBEN, Ontario, Ore.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. PEARL CARD CO., Clintonville, Ct.

FOR SALE—Wire cloth cage for live bee demonstrations and one frame observation hive all grained and varnished in Golden Oak. Just the thing for your County fair. Best offer takes. JOHN C. BULL, Valparaiso, Ind. R. F. D. No. 8.

WANTED—Second hand honey extractor. Must be cheap. S. G. MOGAN, Blooming Prairie, Minn.

FOR SALE—400 Comb Honey Supers made up mostly 10 frame in lots of 10 or more 40c. 100 lots 35c each. W. D. SOPER, Jackson, Mich.

FOR SALE—A good Bee location. For information address GEORGE PARKS, Errington, P. O., B. C., Canada.

FOR SALE CHEAP—In good location 32 $\frac{3}{4}$ acre farm, nice house, good barn, stable, sheds, workshop, 50 stands of bees, extra hives, etc. For full information address J. A. JANSSEN, R. F. D. 4, Charlevoix, Mich.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

HONEY LABELS and Printing at lowest prices, 36 page catalog free. "Get our Beekeepers' Special Printing Offer." LIBERTY PUB. CO., Sta. D., Box 4 J, Cleveland, Ohio.

HONEY JARS FOR SALE—About twenty gross, square glass honey jars, glass top and spring fastener, from one-half to two pounds. In original packages at less than factory prices. Have quit the bottling business. W. H. SETTLE, Gridley, Ill.

WANTED—Healthy young man, farm reared preferred, to work with bees. Experience not necessary. Intelligence, honesty and sobriety imperative. Married or single. Excellent permanent opportunity for right man. D. W. MILLAR, Holguin, Cuba.

WANTED—200-10 frame and 100-8 frame hive bodies. Can use second hand bodies in lots of ten or more. State the number you have, the condition they are in and the price you will take for them on board car at your station. Address Deer Lake Apiaries, Clarkston, Michigan.

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using Eureka Paste. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

POULTRY

White Wyandottes and Buff Orpington eggs: \$1.00 per 15, \$5.00 per 100. Healthy, vigorous stock. G. M. Withrow, Mechanicsburg, Ill.

FOR SALE — Buttercup hatching eggs. Champion layers of extra large pure white eggs, larger than Leghorns and eat only half as much. 15 hatching eggs, price two dollars. Thoroughbred stock, for sale cheap. Tom Barron's English White Leghorns, world's champion layers, six times winners in great laying contests such as the state poultry experiment stations at Mountain Grove, Missouri, and Storrs, Conn. Not show birds but the world's best for egg production. 15 hatching eggs, price \$3.00. HENRY WOODWORTH, Box 505, Cheboygan, Mich.

Review Subscribers Having Honey For Sale

We are herewith submitting a list of subscribers having honey for sale. This list includes those only who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale and the letter "C" following the address indicates they have comb honey for sale and the letter "E" extracted, both letters indicating the subscriber has both comb and extracted honey for sale. This list is published free to paid in advance subscribers to the Review. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

Mrs. Kathrine Beattie, Thibodaux, La. E.
Geo. A. Hummer, Prairie Point, Miss C.
L. T. Rice, Brookville, Ky. E.
J. P. Moore, Morgan, Ky., E.

HORSEMINT

Wilmon Newell, College Station, Tex. E
W. C. Collier, Galoid, Texas E.

AMBER

S. E. Miller, Rhineland, Mo., E.
M. W. Harrington, Williamsburg, Iowa E.
J. M. Cutts, R.F.D. No. 1, Montgomery, Ala.E.

ALFALFA

M. D. Phillippe, Elgentro, Calif., E.

BUCKWHEAT

Thos. Phillipi, Johnsonville, N. Y., E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
N. L. Stevens, Venice Center, N. Y., E.

WHITE CLOVER

Frank Murray, Chase, Michigan C & E.
Frank Wilmert, Elmore, Minn. C.
D. R. Townsend, Northstar, Michigan E.
A. H. Fralick, Homer, Mich. E.
E. B. Rosa, Monroe, Wis. E.
E. A. Doney, Dixon, Iowa, E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
C. H. Burrows, Oran, N. Y., E.
G. Dahlen, Marmony, Minn. E.
Thos. Phillipi, Johnsonville, N. Y. E.
W. M. Peacock, Mapleton, Iowa, E.
A. S. Tedman, Weston, Michigan, E.
A. S. Crotzer, Spena, Ill., C.
Howard Honey Co., Tyre, Michigan, E.
Irving Pierce, Union City, Michigan, E.
Geo. Dodds, Cambridge, N. Y., E.
O. H. Townsend, Merritt, Michigan, E.
N. L. Stevens, Venice Center, N. Y., E.

CLOVER AND BASSWOOD BLEND

Oscar Kazmeier, Kiel, Wisconsin.
Irving Pierce, Union City, Michigan, E.
O. H. Schmidt, R.F.D.No. 5, Bay City, Mich.E
N. L. Stevens, Venice Center, N. Y., E.

SPANISH NEEDLE

J. VanWyngarden, R. No. 4, Hebron, Ind., E.

Forest Glen, Md., Aug. 17, 1915

Mr. E. D. Townsend,
Northstar, Mich.

Dear Sir:—

I have this day received from you a check for \$5.73 as "Rebate on Order 1400." This is an entire surprise as I had no idea I was entitled to such a rebate. My order was for 350 cans only, not 500 of any kind. Can there be a mistake? If not we certainly make money by being a Review subscriber. I enclose a check for \$1.00 to be applied to the Review debt.

Yours very truly,
HANNAH R. SEWALL.

There is no mistake in the figures, Friend Sewall. You see that the producers are beginning to realize there is now something else besides "hot air" in what the REVIEW has to say about buying their supplies collectively. It is like this: As long as we only bought the goods you ordered in small lots, we did not get very good prices, but now things begin to brighten, manufacturers begin to recognize us as dealers of importance, consequently, are willing to give us their very best prices. Your case was like this: You sent us the amount of money that was required to buy in small lots, in the meantime we have secured concessions, which we always give our customers, for we are not working for profit, as we have told you before.

St. Louis, Mich., July 6, 1915

Dear Sir:—

Have received cans all O. K. also rebate on order. Thank you.

Very truly yours,
J. N. HARRIS

A Reduction in Price of Tin Containers For Parcel Post

We told you so! Don't you remember that we told you if you would all turn in and patronize the sales department of the REVIEW we could do wonders for you in prices. Here's one. For some time our trade has been very satisfactory in corrugated paper mailing cases for gallon, half-gallon and quart square tin cans with screw cap. With so large a volume of business we have been able to get the manufacturers' very lowest jobbing prices and as is always the case of our transactions, the buying public get the benefit along this line. For revised prices on the above containers in mailing cases, you are referred to another column of this number of the REVIEW. Remember our double corrugated mailing case is the only one on the market that complies exactly with the postal regulations. Also, that no glue or pasting is necessary with our case. Just telescope the case together containing the can, wrap with a string and it is ready for mailing.

Choice White Clover Extracted Honey For Sale

Left upon the hives until thoroughly cured by the bees; put up in new 60 pound tin cans, one and two in a case for shipment. This thoroughly-cured-upon-the-hive honey is a little higher in price than the ordinary, something in comparison with creamery and the ordinary store butter. I quote a price of \$6.00 for a single can, or 10 cents per pound in lots less than ten cases, two cans to the case. For ten cases or more the price will be 9 1-2 cents per pound. Above prices are free on board the cars here. Sample free. Address, D. R. Townsend, Northstar, Michigan.

Special Prices on 60 lb Honey Cans, 2 in a Case

If you can use 100 cases of 60 lb tin cans, 1 3/4 in. screw, two in a case we have something special both in quality and price to offer. You will miss it, if you buy from other quarters if you are looking for something good in honey cans, at a reduction from regular price. They are shipped from Chicago. Kindly write this office when in need of the very best quality of 60 lb cans, at the lowest price.

The BEEKEEPERS' REVIEW, Northstar, Michigan

Special Price on Friction Top Pails in Re-Shipping Cases

If you can use ten cases or more of any of the following friction top cans or pails in re-shipping cases, we have something special to offer both in quality and price. The list that we can give special prices upon shipped from Chicago is as follows: 2 lb Cans, 24 to the case; 2 1/2 lb Cans, 24 to the case; 5 lb Pails, 12 to the case; 10 lb PAILS, 6 to the case.

Write this office, stating the number and size wanted and we will surprise you with the price we can furnish them for. Always remember that we are working without profit, consequently always quote you the very lowest price available. Address all orders for Tin containers for honey to the point where the lowest price is procurable.

The BEEKEEPERS' REVIEW, Northstar, Michigan

Square Syrup Cans with 1 3-4 inch Screw Caps

In Corrugated Paper Mailing Cases, for parcel post service. The most successful mailing case for extracted honey ever introduced.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
1 1/2 gallon can, including mailing case, per crate of 100.....	8.00
1/4 gallon can, including mailing case, per crate of 100.....	6.00

We cannot furnish less than a full crate of the above at any price.

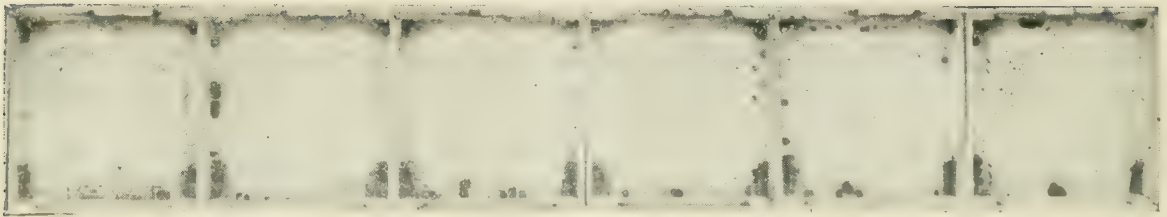
Address all orders to

THE BEEKEEPERS' REVIEW
Northstar, Michigan

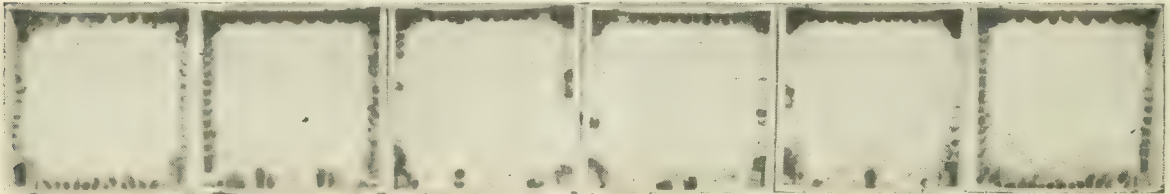
W. H. LAWS' ITALIAN QUEENS

There are no better bees than Laws' Italians. Twenty-seven years careful breeding. My bees have taken premiums in my own and others' hands in many of the states of the Union. A single firm having bought over 6000 queens from me in past seven years say, "Your queens are very satisfactory." A queen-breeder who is using my breeding-queens says he could well afford to have paid \$25.00 each for such queens ten years ago. Untested queens, 90c; 12 for \$9.00; 100 for \$70.00. Tested queens, \$1.00; 12 for \$10.00; 100 for \$85.00. Select tested, \$2.00; 12 for \$18.00; 50 for \$50.00. Breeding queens, a large number of as fine queens, tried and tested, as breeders, each, \$5.00; six for \$25.00. Prompt attention to all correspondence.

W. H. LAWS, BEEVILLE, BEE COUNTY, TEXAS



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

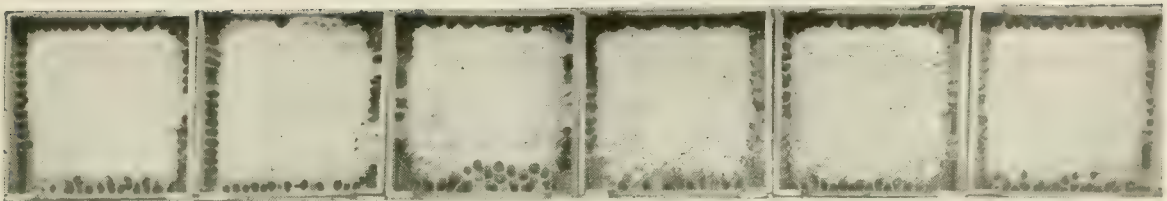
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

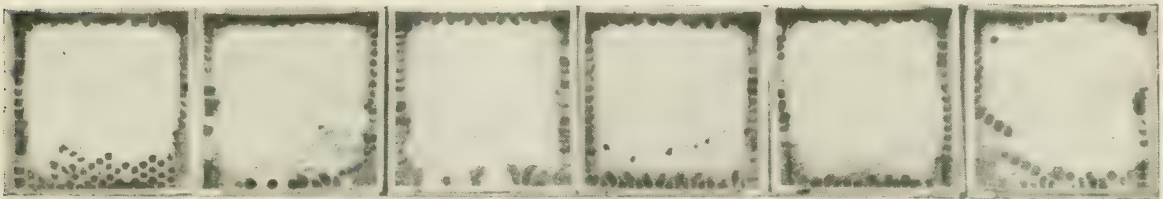
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

I. COMB HONEY

FANCY—Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than 12 1-2 oz. net, or 13 1-2 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 12 1-2 oz." The front section in each case must be uniform color and finish and shall be true representation of the contents of the case.

NUMBER ONE—Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be uniform color and finish and shall be a true representation of the contents of the case.

NUMBER TWO—This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES—Honey packed in second hand cases. Honey in badly stained or mildewed sections. Honey showing signs of granulation. Leaking, injured or patched up sections. Sections containing honey dew. Sections with more than 50 uncapped cells, or a less number of empty cells. Sections weighing less than the minimum weight. All such honey should be disposed of in the home market.

II. EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W" "L. A.," "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

III. STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES—Extracted honey packed in second hand cans. Unripe or fermenting honey, weighing less than 12 lbs. per gallon. Honey contaminated by excessive use of smoke. Honey contaminated by honey dew. Honey not properly strained.

TRADE

The REVIEW is now buying all kinds of beekeepers' supplies for the subscribers. We get wholesale prices on all supplies, returning nearly all the difference between the list price and wholesale price to the subscriber ordering. It is the desire of the REVIEW to make only enough out of the supplies bought for the subscriber to pay postage and the cost of advertising. This scheme is so liberal that ALL ought to take advantage of this buying privilege.

Never before in the history of beekeeping have the masses had the privilege of buying their supplies at near wholesale prices, and a person is very short sighted to pay the LONG CATALOG PRICE for his supplies when this privilege of buying at the lower price is open.

Have you got into such a "rut," that you MUST order your goods through the OLD HIGH PRICED channel or are you progressive enough to break away from the "Ties that bind" and come over into the new and better way of buying, i. e. that of buying collectively. Some one has said that it would "take one hundred years to educate the people to the importance of buying collectively.", About ten percent of beekeepers are NOW educated up to this standard and are taking advantage of this grand privilege, and this appeal is to the other ninety per cent who seem not to be able to comprehend that there is a possibility to make their dollars go further than through the OLD, OUT OF DATE way of buying individually.

The dealers will "tickle" when they hear you say, "I'm from Missouri, I have to be shown" for they know the one uttering these sentences is so far behind the times that he will live in the "old rut," to the benefit of the dealer and finally drop out, without ever receiving a single benefit from cooperation. DO NOT BE THE ONE TO STAND BACK TO BE SHOWN, but come to the front and be one that will say "We will show them," and take the word of your old friend Townsend, that we will win, AND IN LESS THAN A HUNDRED YEARS, too.

We hope to add another 10 per cent to the already well pleased 10 per cent that are now buying through the REVIEW, before the end of the year, will you be one of them to save a few dollars by this collective buying!

It would be a "cold day" when Roderick Cameron, Shabbona, Michigan, would buy his supplies otherwise than through the Review, for there is a reason, listen:—On August 13th, he placed an order with the Review for \$30.00 paying 12½ per cent of it with two rebate checks he had received from previous orders. He will get a nice rebate check on this last order, so you see we will have an "endless chain," so to speak, with him (and others too) for you see he could not afford to buy through other sources, where no rebate check would be forth-coming.

Virgil Weaver, Falmouth, Ky. bought 100 cases of 5 lb friction top pails, 12 in a re-shipping case for which we quoted him a special price of \$55.00 per hundred. After making him this unheard of low price, he received back a rebate check of \$3.00 when we mailed him his bill. Do you remember what you had to pay for tin containers before the advent of the National and now the Review has taken hold of this proposition for the producer! Don't you begin to see the possibilities of buying collectively? The Review is now no doubt the largest distributor of Tin Containers for Honey in the world. Is it any wonder that when we ask manufacturers (we buy direct of the manufacturer) for their price on tin containers, that they "take notice" for they know that their answer may make or lose many thousands of dollars in trade. Patronize the bridge that carries you across safely. No matter what any one quotes you for your supply business, we can likely do as well, or better. At any rate you will be used very well.

We could go on and fill this number of the REVIEW with similar instances of well pleased REVIEW customers who have saved all the way from a dollar to \$30.00 on single deals they have bought through the REVIEW, but space forbids mentioning others at this time. You may think you are getting a very close price through the dealer you have been buying of along back, but all we ask is for you to send us the same money you have been paying in the past, you saying of whom you bought, we will take the money and buy at the very closest price possible, returning you the difference, if any. Do not write asking for prices, as we have none, but just make out your order as usual, inclosing the usual amount of exchange, say whose goods you want and we will do the rest.

A trial order will convince you. Hereafter, address all orders for beekeepers' supplies of every sort to

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

Queens of "Lewis" Quality

Requeen in September, the month of fall flows, with "Lewis" queens, and guarantee plenty of young bees for winter and a honey harvest next year. Bred for business, these queens are large and vigorous, and specially resistant to European foul brood. They are reared and mated under the best conditions and are guaranteed to give satisfaction in every respect, or money refunded without question. Better than most and as low priced as good queens can be sold. Safe arrival and purity of mating guaranteed. Better order today.

G. B. LEWIS COMPANY, Watertown, Wis.

Golden and Three Banded Italian Queens For Sale

The Review has made arrangements with the following queen breeders to furnish Review subscribers with queens at their price, listed in other part of this number of the Review. It will be noticed that the list is of the most reliable breeders we have at the present time, and we take pleasure in offering their stock as the very best obtainable at any price, not excepting imported stock. We have spoken for a goodly number of those fine queens, so can promise our readers very prompt delivery at the present time.

The Mr. John M. Davis strain of three banded Italians needs no introduction at this time, his 43 years experience as a breeder for the market has placed his fine stock far above the average, and the beauty of it is, he promised to ship all queens almost by return mail. Order through The Review to be sure of this very prompt service. The price we sell at is given in his advertisement on another page.

Mr. J. P. Moore strain of three banded queens is world renowned for gentleness, hardiness and good honey gathering characteristics. Mr. Hutchinson used to say there was **none better to be had**. Mr. Moore has promised us that he would mail queens by return mail to Review subscribers. An order through the Review would insure prompt delivery.

Mr. Ben G. Davis, breeder of the "Davis" famous "Goldens." Mr. Davis in his strain of goldens has combined honey gathering qualities with beauty and gentleness. There has more favorable comment reached the Review office regarding "Ben's" goldens, as disease resisters than any other breeders. This means that they are a hardy and industrious strain. Ex-Director Buchanan says "they are the best disease resisters I ever saw." Mr. Buchanan was State inspector of apiaries of Tennessee for several years and ought to know. Mr. N. E. Franes says "They are wonderful disease resisting bees." If you are in an European foul brood location, it would look as if this strain would be the one to select as "good housekeepers" to fight this disease with. Mr. Davis has promised to mail Review orders promptly, by return mail.

In requeening this Fall, mail all orders to **THE REVIEW, Northstar, Michigan.**

Our 1915 Crop of White Clover Extracted Honey For Sale

TOWNSEND'S ULTRA-QUALITY

Gathered from the clean meadows of old Gratiot County, where hardly a single other blossom can be found, except the White and Alsike clover, we can this year offer Clover Extracted Honey in its purity. In the production of this crop of honey, we offer you our forty years' experience in learning how to produce the **very best quality of honey from the very best honey nectar producing plant in the world**, White and Alsike clover. Combs are provided, so no honey is extracted until it is thoroughly cured on the hive, by the bees. Besides this, our honey is produced in **nice clean white combs**, above queen excluders. Last Fall, these white combs were cleaned of all honey adhering to them, by the bees, lest there should be some little old sour honey from last year mixed with this new crop to impair its flavor. Rich, ripe, roapy, are some of the "pet names" given our honey by the consuming public. Of course, this Clover honey, handled as we do, would naturally be of a most delicious flavor, aroma, boquet. As usual, this 1915 crop of Ultra-quality white clover extracted honey will be canned in brand new, bright, shiny, tin cans, containing 60lb net weight, and crated one and two in a case for shipment, the bulk being crated, two in a crate. It costs some more to produce Townsend's Ultra-quality honey, than the ordinary extracted honey upon the market, then as it is evaporated down so close and heavy body, we do not get so many pounds by this process, consequently have to sell it for a little advance over regular stock. We quote you this fine stock as long as it lasts F. O. B. our station as follows: one 60lb net can cased singly of this best stock at \$6.25 per can; in cases of two cans, one to nine cases inclusive, at 10 cents per pound; 10 or more cases at 9½ cents per pound. We will this year make a charge of 10c for a sample of this fine honey, but will return 25c with your first order to pay you back for your money and inconvenience in remitting same.

While our entire crop of **Townsend's Ultra-quality** extracted honey is still upon the hives "curing" as we go to press, some will be ready by the time this number of the Review reaches you, so you can order upon receipt of this, expecting your order to have our most prompt attention. Our **binding guarantee** is that if this **Townsend's Ultra-quality** extracted honey is not as good honey as you ever bought at any price, or, if for any reason you do not care to accept it upon arrival we will gladly take it off your hands and refund your money, including all freight charges. Could we offer more! Of course you will realize we could not make this offer if our stock of honey was "just ordinary" but **Townsend's Ultra-quality** extracted honey is not of the ordinary kind, so we do not fear the results of this binding guarantee. Remember there is but one **Townsend's Ultra-Quality** extracted honey and to secure this splendid brand address

E. D. TOWNSEND & SONS, Northstar, Michigan, U. S. A.

GRAY CAUCASIANS

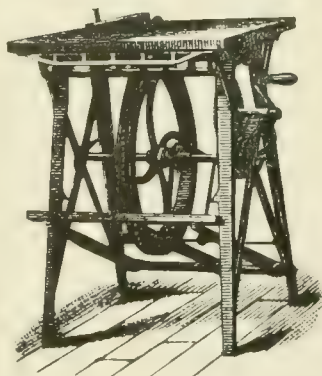
Their superior qualities are early breeding; great honey gatherers; comb honey cappings being beautifully white; very prolific; very gentle; great comb builders; not much inclined to swarm; give better body to their honey; not much inclined to rob; very hardy; never furious, good winterers everywhere; the best all-purpose bee. Send a trial order for a queen or nuclei and be convinced. Prices on application.

J. J. WILDER, Cordele, Ga.

The Pearce Method of Beekeeping

I am rewriting, revising and enlarging the Pearce Method of Beekeeping. It was my intention to have it put out by the first of March, but owing to a spell of sickness it was delayed, but will be out on or before the first of May. Order now! The price, 50c, will be the same as the first edition.

Address **J. A. PEARCE, Route 1, Grand Rapids, Mich.**



MAKE YOUR OWN HIVES

Beekeepers will save money using our Foot Power

SAWS

in making their hives, sections and boxes. Machine on trial. SEND FOR OUR CATALOGUE

W. F. & JNO. BARNES CO.

84 RUBY STREET

ROCKFORD, ILLINOIS

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, furnished at 30c. per thousand and postpaid. Advertise Honey, Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to

PEARL CARD CO., Dept. A5,
Clintonville, Conn.

Six Pound Glass Jars for Honey

This half gallon Flint glass container, with screw cap about the same size as a mason jar, is the only one we can furnish at the present time, as our manufacturers at Alton, Ill. have decided that they have no license to sell us their goods for honey, so we cannot furnish the containers listed in the August Review. This jar has a special lacquered screw cap, about as good as could be devised for honey, and we can furnish them four dozen in a case at 71 $\frac{1}{2}$ c each, or \$3.60 per crate, f. o. b. Washington, Pa. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

WANTED

10 Cars Comb Honey

Coyne Brothers

118 W. South Water St.

Chicago, Ill.

Honey is One of Our Leading Specialties

CAR LOTS OR LESS

No Risk Doing Business With Us---

Our Financial Responsibility Exceeds \$100,000.00

BUY YOUR QUEENS

from the man who guarantees every one to be purely mated or your queen replaced.

	Before July 1st			After July 1st		
	1	6	12	1	6	12
Untested	\$1.00	\$5.00	\$9.00	\$.75	\$4.00	\$7.00
Select Untested	1.25	6.00	11.00	1.00	5.00	9.00
Tested	1.50	8.00	15.00	1.25	6.00	11.00
Select Tested..	2.00	10.00	18.00	1.50	8.00	15.00
Breeders	5.00			4.00		
1. Comb Nuclei	1.50	8.50				
2. Comb Nuclei	2.50	13.00				

Your choice of either Golden or Leather Colored queens by return mail. Above prices on Nuclei do not include queen. You are to select such queen as you wish with the bees and add the price.

L. MORRISON

2200 E. 2nd St.

Argenta, Ark.

"falcon" BEE SUPPLIES

SHIPPING CASES, EXTRACTORS, HIVES, ETC., EVERYTHING FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. FALCONER MFG. CO., Falconer N. Y.

Where the Good Bee-Hives Come From

The Pearce Method of Beekeeping

The new revised **Pearce Method of Beekeeping** is just from the press, and is being mailed promptly upon receipt of orders. The new edition had 56 pages and cover, the size of the **REVIEW** and the price is 50c postpaid to any address. Remember we club the **Pearce Method of Beekeeping** with a year's subscription to the **Review** for only \$1.10 postpaid. To secure this low clubbing rate, address all orders to

The Beekeepers' Review, Northstar, Michigan

**SELL
YOUR**

QUEENS IN CANADA

In the Province of Ontario alone there are 11,000 persons producing honey. A very conservative calculation means that there are 50,000 Queens. If you have Queens to sell the Canadian Beemen, say so in *The Canadian Horticulturist and Beekeeper*, the only bee publication in Canada. It is the official organ of the Ontario and New Brunswick Beekeepers' Associations.

Classified rate 3c per word—each single number and sign counting as one word. Cash in advance.

Specimen copy on request

The Canadian Horticulturist and Beekeeper

PETERBORO, CANADA

THE "BOOSTER"

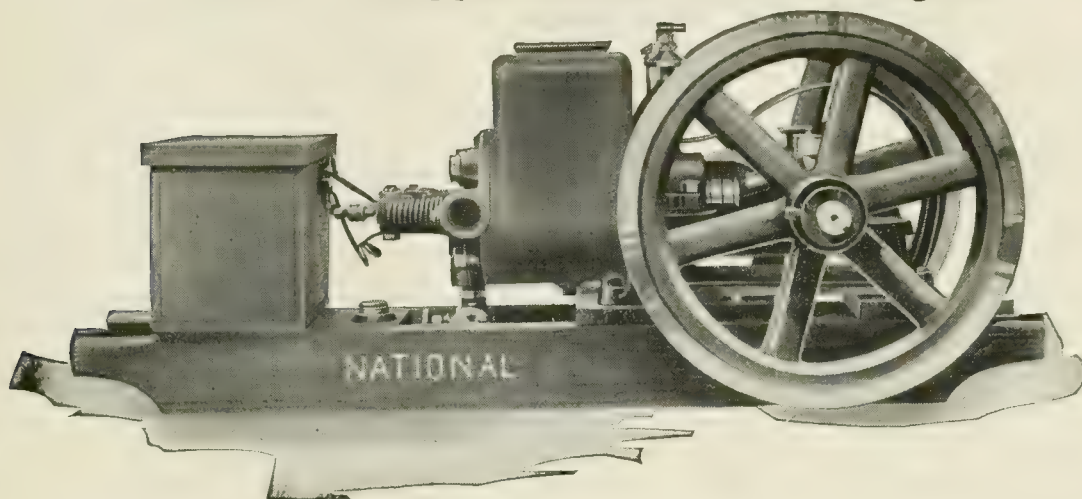
A Popular Paper at a Popular Price

Devoted to the selling end of the honey business. Will give the best and latest methods of selling honey. Just the thing to increase your sales and profits. "Every number is a good number." You should not miss one. 25c for a whole year's subscription, Clubs of 5—\$1.00.

The "BOOSTER"

REDKEY, INDIANA

1 1-2 H. P. Hopper-Cooled National Engine



General Description

In design National Engines have all the strength needed to withstand continuous hard work. Every working strain is properly provided for.

The Cylinder is made of semi-steel, noted for its remarkable strength and density. Every hopper cooled cylinder is given a special high pressure water test to guard against leaks in the cylinder walls or jacket. The water space is exceptionally wide and a drain at the bottom of the cylinder allows water to be taken out when necessary.

The Crank Shaft is a steel drop forging of the best quality, accurately finished by grinding.

The Connecting Rod is of malleable iron and has an automatic lubricating method. This takes care of the bearings on both ends from the waste cylinder oil—a saving of expense and trouble.

The Piston is ground to a mirror finish and has automatic lubrication for the wrist pin bearing.

The Piston Rings, three in number, are eccentric and lap jointed. This is the most perfect ring known. They are ground like the piston.

The Governor is of simplest design, hit and miss, absolutely reliable and economical in its regulation of fuel consumption according to load.

The Fly Wheels—Smooth running in an engine, especially on truck, depends on the fly wheels. National Engines have fly wheels that are accurately turned and properly balanced. The engines will run steady without blocking the truck wheels.

The Mixer is our famous design with both needle valve and air shutter regulation. These adjustments enable the user to secure uniform results under varying loads.

Lubrication is ample throughout—a sight feed oiler on the cylinder and automatic lubrication on the connecting rod. The crank bearings have hard oilers.

Ignition is either make and break or jump spark. Each kind is of the simplest character and perfect in adjustment when the engine leaves the factory.

National Engines are shipped ready to run after careful tests at the factory. Unless damaged in transit the engine will be ready for work as soon as uncrated and supplied with fuel and lubricating oil.

Horse power, $1\frac{1}{2}$; bore, $3\frac{3}{4}$; stroke, $4\frac{1}{2}$; speed R. P. M., 500; fly wheels, diameter 16, weight 37; crank shaft diameter, $1\frac{1}{4}$; floor space, 9x36; shipping weight 200.

Hand Trucks, \$4.50 extra.

Larger sizes a matter of correspondence.

Price \$32.50, Co-operative.

Address all orders to The Beekeepers' Review, Northstar, Michigan.

Tin Containers for Honey from New Orleans, La.

We have made arrangements so we can ship Tin containers for honey from New Orleans, La. to supply our Southern and West Indies trade; we quote as follows:

Friction Top Pails and Cans

Approx. Capacity	Per 100 In 50 Lots	Per 100 In 100 Lots	Per 100 In 500 Lots	Per 1000 In 1000 Lots
3 lb. Cans		\$3.15	\$3.00	\$29.50
5 lb. Pails	\$5.25	5.00	4.75	45.00
10 lb. Pails	7.35	6.85	6.60	63.00

5 Gallon Square Honey Cans, $1\frac{3}{4}$ in. Screw

50 in one large crate, per crate.....	\$11.00
1 in a case, per case.....	33½
2 in a case with partition, price per case.....	63

5 Gallon Cans With 8 in. Screw Caps

1 in a case, per case.....	40
2 in a case, with partition, per case.....	73½

Texas customers furnished from Detroit, Mich.

THE BEEKEEPERS' REVIEW, Northstar, Michigan

Golden Italian Queens

Mr. Beekeeper, do you want the best queens that money can buy? If so try this strain of Goldens that for fifteen years has been a leader. All queens reared from superior Golden mothers and mated with select Golden drones; are large, vigorous and prolific; the bees gentle and hustlers, and are noted throughout the United States as a disease-resisting strain. Mated from strong nuclei, three to five full Langstroth frames. Safe arrival (U. S. and Can.) purity of mating and satisfaction guaranteed. Write for descriptive circular.

PRICES OF QUEENS

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
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Tested.....	2.00	8.50	15.00	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Sel. Tested..	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Untested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	11.00	18.00

Breeders \$5.00 to \$25.00

BEN G. DAVIS, Spring Hill, Tennessee

Please mention The Review when writing.

TENNESSEE-BRED QUEENS

43 Years Experience in Queen Rearing--Breed 3-Band Italians Only

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
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Bees by the pound, 1 lb., \$1.25; 2 lb., \$2.25; 3 lb., \$2.75, July August and September.

Nuclei (no queen) 1 fr. \$1.50; 2 fr. \$2.15; 3 fr. \$2.75; 4 fr. \$3.50; pure 3-band Italians.

Select queen wanted, add price.

**Capacity of yard, 5000 queens a year--Select queen tested for breeding \$5.00
The very best queen tested for breeding \$10.**

Queens for export will be carefully packed in long distance cages, but safe delivery is not guaranteed.

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S. D. House, Camilus, N. Y., June 12, 1912.

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iness and good honey gathering qualities, they are second to none among our 1,200 colonies.

M. A. Gill, Longmont, Colo., July 7th, 1903.

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James I. Davis, Lincoln, Neb., May 24, 1909.

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and this year, two cases at time of supercedure, July 10.

H. G. Henthorne, Plattsville, Col., July 16, 1907.

JOHN M. DAVIS, Spring Hill, Tenn.

NOTICE TO QUEEN BREEDERS

If you want to sell Queens and Bees, advertise in the **AMERICAN BEE JOURNAL**. Read what some of our advertisers have to say about the pulling power of our advertising pages:

Got good results from the advertisement I ran in last season's Journals.

D. G. LITTLE, Hartley, Iowa.

We have advertised in the American Bee Journal for thirty years. Have always found it a good advertising medium.

J. W. K. SHAW CO., Loreauville, La.

My advertisement brought all the Orders I wished for. In fact, more than I was able to supply. Quite a number of orders had to be returned.

J. A. SIMMONS, Sabinal, Texas.

The American Bee Journal is a good medium for advertisements. We have had all the Orders booked we could fill.

GOLDEN RULE BEE CO., Rialto, Calif.

The Reasons are self evident—a good bee paper is taken by live and wide awake beekeepers and these are the kind that are always in the market for good bees and good queens.

Rates on space are not high. Display at 15 cents a line or \$2.10 per inch. Classified 15 cents a line.

Send in your order with copy today and get rid of your surplus queens.

AMERICAN BEE JOURNAL
HAMILTON, ILLINOIS

Have Your Old Combs

CAPPINGS OR SLUMGUM

Rendered by our

High Pressure Steam Wax Presses

Dadant & Sons,
Hamilton, Ill.

Dear Sirs:

I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Out outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

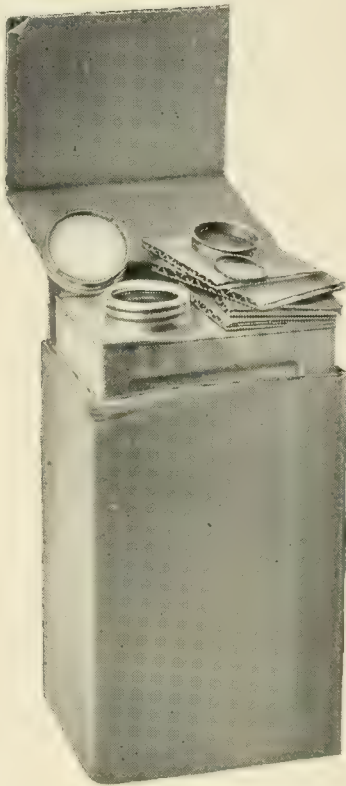
DADANT'S FOUNDATION

Just Now We Offer Attractive Terms on Best Quality
BEE SUPPLIES—Send a list of what you need

DADANT & SONS

Hamilton, Illinois

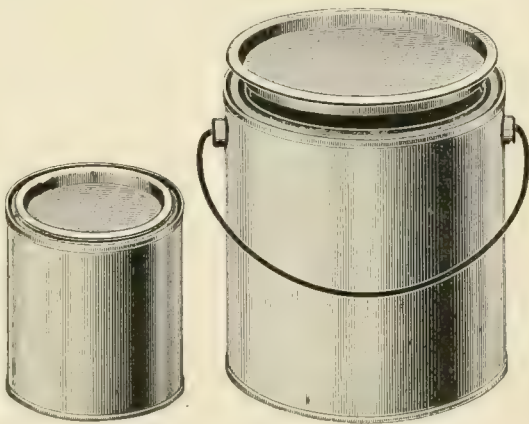
Canco Honey Cans and Pails



PATENTED

Parcel Post Honey Package, oblong can with slotted screw, record seal and rubber gasket. Individual corrugated cartons. 6 lb. and 12 lb. sizes only.

Spencer Friction Top Cans and Pails

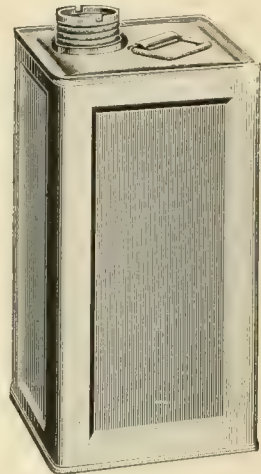


PATENTED

In sizes holding approximately 2 lbs., 2½ lbs., 3 lbs., 5 and 10 lbs.

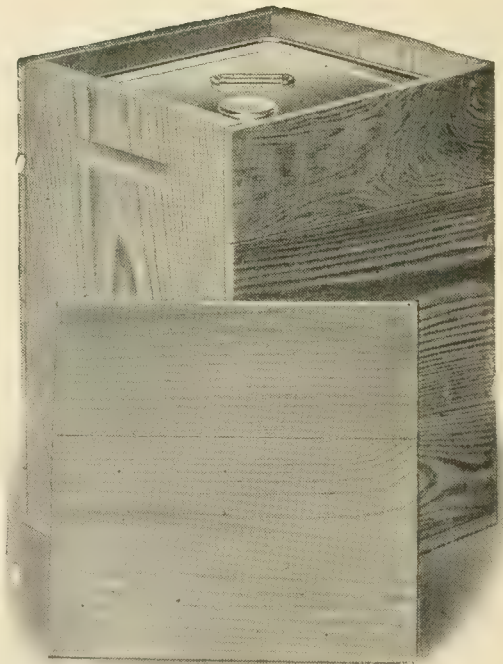
Write for prices.

PATENTED



1 GALLON SQUARE

ROUND
SQUARE
CRATED
or
BOXED



60 Pound Square

One and two in case.

American Can Co.

New York Chicago
147 West 14th St. Monroe Bldg.

TIN CONTAINERS FOR HONEY

FRICTION TOP PAILS



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity		Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2	lb. Can	.....	\$2.25	\$2.15	\$20.00
2½	lb. Can	.....	2.75	2.60	24.00
3	lb. Can	.....	3.00	2.85	28.00
5	lb. Pail	.....	\$5.00	4.75	42.50
6	lb. Pail	.....	5.25	5.00	45.00
10	lb. Pail	.....	7.00	6.50	60.00
12	lb. Pail	.....	7.25	6.75	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans	.....	.71 per case
12 pails in a case, 5 lb. Pails	.....	.65 per case
12 pails in a case, 6 lb. Pails	.....	.70 per case
6 pails in a case, 10 lb. Pails	.....	.49 per case
6 pails in a case, 12 lb. Pails	.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price	.....	\$ .33 per case
2 in a case, price	.....	.60 per case
2 in a case in lots of 250 cases, price	.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price	.....	58.50 per 100 cases
50 in a crate, price	.....	\$10.50 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.		

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @	.....	.60c per case
10 in a wooden re-shipping case @	.....	.95c per case
50 in one large crate	.....	\$3.63 per crate
½ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	\$5.50
¼ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to Review Subscribers cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

Address

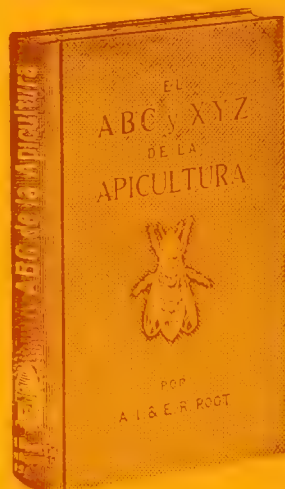
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



The Authoritative Manual on
Apiculture

The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



Order direct of the Publishers
or from Dealers

The A. I. ROOT COMPANY

MEDINA, OHIO, U.S.A.



The Beekeepers' Review

Published Monthly



OCT.
1915

▼ ▼ ▼
NORTHSTAR,
MICHIGAN

ONE DOLLAR PER YEAR

Start the Season Right

by using

DITTMER FOUNDATION

The bees like it for it's made to just suit them and is just like the Natural Comb they make themselves.

Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

All other Supplies in Stock

Gus Dittmer Company
AUGUSTA, WIS.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping: DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping cases are dandies.

Ask for catalogue of Supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

PAGE-KENKEL MFG. CO.

MANUFACTURERS

of the

"NONE BETTER"

**Beekeepers'
Supplies**

Perfect sections from young, white basswood, White Pine Hives and Supers, Excellent Shipping Cases, Brood Frames, Separators, etc.

Guarantee:—All goods guaranteed perfect in material and workmanship or money cheerfully refunded.

Page-Kenkel Mfg. Co.
New London, Wis.

'Our Very Best is THE Very Best' BEE SUPPLIES

BEST SECTIONS.

BEST SHIPPING CASES.

BEST OF ALL SUPPLIES.

BEST PRICES you will get for your honey when put up in our sections and shipping cases.

"LOTZ" sections and shipping cases have stood the test. WHY? Because they are perfect in workmanship, quality and material. Buy Lotz goods when you want the best. Our 1915 catalogue ready January 15th, send your name and get one.

H. S. DUBY & SON

ST. ANNE, ILLINOIS

Carries a full line of our goods

AUG. LOTZ CO.
BOYD, WIS.

Golden Italian Queens

Mr. Beekeeper, do you want the best queens that money can buy? If so try this strain of Goldens that for fifteen years has been a leader. All queens reared from superior Golden mothers and mated with select Golden drones; are large, vigorous and prolific; the bees gentle and hustlers, and are noted throughout the United States as a disease-resisting strain. Mated from strong nuclei, three to five full Langstroth frames. Safe arrival (U. S. and Can.) purity of mating and satisfaction guaranteed. Write for descriptive circular.

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JOHN M. DAVIS, Spring Hill, Tenn.

More Money for Your Honey

WHEN PACKED IN

Lewis Superb Shipping Cases

After you have harvested a nice lot of comb honey do not make a serious mistake by putting it up ready for the market in a cheap appearing case such as a home-made one or that turned out by a local planing mill. The best and most economical (taking the sale of the honey into consideration) case must be turned out with the same careful workmanship and with the same selection of proper material as goes into the making of first class bee hives and honey sections such as we manufacture.

It is an acknowledged fact that comb honey put up in attractive Lewis Shipping cases will bring from one to two cents per pound more than the same honey put up in poor cases. Do not cheapen your product by inferior cases. You can afford the best—remember your shipping cases are the show windows for your goods. Your honey will bring more money if well displayed.

INSIST ON THE LEWIS MAKE

LEWIS SHIPPING CASES are cut accurately out of clear, sound basswood lumber. All of these cases are neatly packed and include the proper size nails for nailing them up.

G. B. LEWIS COMPANY

SOLE MANUFACTURERS

WATERTOWN, WISCONSIN

For Sale by Us and the Following Lewis Distributors

CALIFORNIA.....	W. A. Trickey.....	Bishop
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COLORADO.....	Producers' Association	De Beque
COLORADO.....	A. S. Parson	Rocky Ford
COLORADO.....	Coffin & Foster	Rifle
COLORADO.....	J. Roscoe Miller.....	Montrose
GEORGIA.....	J. J. Wilder.....	Cordele
IDAHO.....	City Grain & Poultry Co.....	Nampa
ILLINOIS.....	Dadant & Sons.....	Hamilton
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MICHIGAN.....	A. G. Woodman Co.....	Grand Rapids
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NEW MEXICO.....	H. H. Brown.....	La Plata
NEVADA.....	H. Trickey.....	Reno
OHIO.....	Fred W. Muth Co.....	Cincinnati
OREGON.....	Chas. H. Lilly Co.....	Portland
TENNESSEE.....	Otto Schwill & Co.....	Memphis
TEXAS.....	Southwestern Bee Company.....	San Antonio
UTAH.....	Foulger & Sons	Ogden
WASHINGTON.....	Chas. H. Lilly Co.....	Seattle
PORTO RICO.....	Fritze, Lundt & Sons.....	Ponce
ENGLAND.....	E. H. Taylor.....	Welwyn

The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE

NATIONAL BEEKEEPERS' ASSOCIATION INC.

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo.

PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9, 1913, at the postoffice at Northstar, Michigan, under the act of March 3, 1879,

TERMS—\$1.00 a year to subscribers in the United States, Canada, Cuba, Mexico, Hawaiian Islands, Porto Rico, Phillippine Islands, and Shanghai, China. To all other countries the rate is \$1.24.

DISCONTINUANCES—Notice will be given at expiration of subscription. Subscribers are urged, if unable to make payment at once after expiration, to notify us when they can do so. Anyone wishing his subscription discontinued should so advise upon receipt of expiration notice otherwise it will be assumed that he wishes THE REVIEW continued and will pay for it soon.

Advertising rates on application.

Forms close 20th of each month.

VOL. XXVIII NORTHSTAR, MICHIGAN, OCTOBER 1, NO. 10

An Annual Honey Day

Director Williams of the "Booster" is agitating the matter of having one day each year set aside as "Honey Day" and has suggested that we start something by observing November 25th as Honey Day. The Review does not see anything to lose and there may be something of benefit from such a move. We will see. Mr. Williams is a hustler, but let me tell you friend beekeeper that one man can do but little, and it rests with the individual beekeepers to see that something is done in his or her immediate neighborhood. Get something in your local and county paper about it; see to it that your dealers are all supplied with honey for the occasion. Then you should get out some signs to hang in the grocery windows. They need not be an elaborate affair, perhaps printed by hand, stating in a few words. "This is Honey Day; Eat a little honey today." In this way you may stimulate your local demand and get people talking about honey. Remember, you cannot lose anything by the venture and may and likely will make some gain in the amount of honey consumed in your locality.

Notice to Secretaries of Affiliated Associations

Secretaries of Affiliated Associations will take notice that they have to notify their members the first of November of any proposed change of the Constitution of the National Beekeepers' Association that may be brought before them, for the new constitution requires a three months' notice be given members so the delegates at the February, 1916 meeting can act upon it. It is customary to publish those notices in the November Review and as the forms close the 20th. of this month, a quick response is necessary.

Queens of Quality

Among our eleven-hundred colonies of bees, worked exclusively for extracted honey, a dozen or fifteen colonies far outstripped all others in the quantity of honey gathered. It is too bad some commercial queen breeder could not have such tested honey gathering stock as breeders. It would seem as if nearly every one of our eleven yards would develop some few colonies that would gather four or five times as much surplus honey as the average of the yard. We have at least a dozen colonies that have stored two-hundred-fifty pounds or more of honey this poor season, where the whole average has not been much, if any more than thirty-five pounds per colony. There is likely no queen breeder today who has such an opportunity to test out the honey gathering qualities of his stock as this. If generation after generation of such breeding stock were used, good results would most surely be obtained.

Prof. H. F. Wilson of the Entomological Department of the Oregon Agricultural College has given up his position there and accepted the head of the Department of Economic Entomology at the University of Wisconsin. From a letter just at hand we copy as follows:

"Since it appears that there is considerable beekeeping in Wisconsin, I shall again try to get into active service in this work and I may possibly be able to take part in investigational activities that will be of some benefit to the state and community at large."

Until recently, Prof. Wilson has been secretary of the Oregon State Beekeepers' Association and, while in this capacity, we at this office have had an opportunity to learn that the professor was very friendly to the beekeeping fraternity, and we congratulate our Wisconsin subscribers on their good fortune in securing Prof. Wilson at their University.

Eat Michigan Honey

While at the Michigan State Fair at Detroit, last month we met Prof. F. E. Millen, our energetic State Inspector of Apiaries, who had an educational exhibit of bees and supplies for our Agricultural College. Prof. Millen, besides being our State Inspector of Apiaries, is also the secretary of the Michigan affiliated branch of the National Association. While talking with him he proposed that we beekeepers here in our state take up the slogan, "Eat Michigan Honey." If we understood him correctly, his idea is for the different associations in the state to distribute little stickers to their members, they in turn sticking them all over Michigan (and other states too) always keeping people who use honey thinking about Michigan honey. Of course, the idea is not patented, any state can do the same, and we think it one of the best ideas presented in a long time. Mr. Secretary of the different associations, bring this matter before your convention at the next meeting, we are sure there is something in the idea. Those little stickers can be bought in large quantities for about twenty-five cents per thousand.

Eat Michigan Honey

Are you working that home market of yours for all it is worth? Honey sold near home, direct to the consumer ought to bring you rich returns. Of course, if you are not "brainy" enough to ask and get a good fair price for your hard earned produce, you **could** do a great lot of work for nothing. Produce a good quality of honey, then ask a good price for it in your home market. "Get a home market" will be our slogan in the future. It's for the producers' interest.

What is the National Beekeepers' Association Doing?

One would wonder if the National Beekeepers' Association were "drifting" toward an association of brass buttons and shoulder straps, whose only mission seems to be to meet in some large city annually and wear a badge.

If we are going to have a National Honey Day, we need the National Beekeepers' Association behind it. We need it for the name's sake if nothing more, to give it prestige. There are those who would push the movement if the National would take the ini-

tative. Will they do it?

We need a standard Langstroth hive. Once upon a time a committee was appointed with a scientific name to try and standardize the Langstroth hive. Did they do it? Did they do anything? Are they alive? It cannot be possible. This is a problem for the National to take hold of. Will they do it?

We are discriminated against in freight rates. We are charged higher rates than syrups in the same containers weighing the same. The National Beekeepers' Association is the one to take hold of this problem. Will they do it?

We ought to be a live association. Will we do it?

Feeding Bees for Winter Stores

For October feeding of bees for winter stores, the feed should be given to the bees quite hot. Since the advent of brood diseases, no honey is fed in the liquid form, but instead, granulated sugar syrup is substituted. Weigh up fifty pounds of water to each 100 pounds of sugar, bringing the water to the boiling point then add the sugar, stirring until all is dissolved. If six teaspoonfulls of tartaric acid is added to each 100 pounds sugar melted, to change the cane to invert sugar, may be advantageous.

A Friction Top Pail as a Bee Feeder

For outyard work and feeding at home, we cannot conceive of anything better as a bee feeder than about a ten pound friction top pail, where large quantities are to be fed as for winter stores.

To make the feeder, simply perforate the cover with very small wire nails, making many perforations. Fill your pails with sirup, load on your wagon and drive to the outyard, if you have one to feed, and there you are with the sirup ready to set upon the hives.

How to Arrange the Feeders

In feeding with friction top pails, remove the hive cover and place two or three strips of lath across the hive, on the broodframes. Invert the pail of sirup and place upon the lath, being sure to hold the pail over the swarm being fed when the pail is inverted, for some little sirup will run out during the operation, but will stop when the pail is left alone. One or more pails can be given at a time, dependent upon how much is required to winter the colony.

When the feeders are adjusted upon the hive, an empty hive body is set over all and the cover replaced and the work is done. With this feeder inverted over the cluster you can feed any time up to holidays, as they will take the feed from this feeder when they would starve with feed in the Miller of other similar feeders. We think this is the best thing we have published this year.

General Correspondence

English Beekeeping in Ye Olden Times

A. H. BOWEN, Coronation Road, Chaltenham, Gloucestershire,
England

In these days of modern and commercial bee-culture one can look back with much interest to those far-off days when the frame hive was almost unknown, and the old, round, cosy bee skep sheltered the honey makers of that ancient time. You can imagine it hackled or pots herded on its one-legged stand, nestling among the sweet scented flowers of a cottage garden; or a whole row of old fashioned hives might have once been seen under a warm southern wall in the kitchen garden of the Manor House.

In years gone by the keeping of bees was mainly restricted to the country districts. Cottagers learned to love these busy insects, and highly prized the delicious honey which was such a treat in those days, when the luxuries of life were few, indeed, and even the necessities difficult enough to obtain. Then we find most gardens had their bee-hives, and the pleasure derived from tending them during the months of sunshine did much to brighten the uneventful lives of the simple village folk.

Straw skep weaving was largely practiced in those days, and the stout hives almost an inch thick took as much skill to make, as that required for the thatching of a barn or rick.

The size used varied much according to the district—a large hive for big swarms in good localities, and smaller ones for casts, or where the bee-pasturage was poor.

Sometimes a small hole was left in the hive top if the bee-man had a fancy for virgin honey in a straw super, but more often than not it was fashioned cone shape for the better fitting of a hackle or pan; serving to keep the hive cool in summer and warm

in winter.

The bees were allowed to build as they pleased, and save for the two sticks placed crossways inside as supports for the comb nothing was done to assist in their work; whilst at swarming time the burly drones seemed almost as numerous as the bees themselves. And there was no queen bee in those days—at least the beemaster thought not. The eggs were deposited by a certain number of “laying bees” told off for the work; “an’ when they laying bees dies the hive is bound to perish.”

Swarming time and “taking-up” time, were two important events in the bee year, for at these periods the skeppist took an active part in the ordering of the bee garden.



A QUAINC COTTAGE
The Home of a Cotswold Beemistress
Photo by A. H. Bowen

The yellow throated crocuses had come and gone, the apple orchards were roofed with pink blossoms, and at last the merry month of May brought in the swarming season.

The oldest hives in the garden were generally the first to swarm, and the bees would give warning of their intended migration by “hanging out” in great brown clusters all over the face of the hive, and down the leg of the stool; whilst the sweet summer

dark saw them still out all night long, waiting for the sealing of the queen cells.

At last the day arrived, and out would rush the bees pell-mell as though the hive had burst like a bomb-shell, and far above the joyous sound would be heard the tang-tang of warming pan and door key, as the beeman beat lustily while the insects settled in a huge cluster under the eaves of the cottage, or in the heart of a gooseberry bush.

And then there is the careful dressing of the hive, and the health of the bees to drink that they may be safely hived. Sometimes a swarm would fly straight away over the meadows, but the beeman never followed it lest its return might bring bad luck



WHAT AN ENGLISH HIVE LOOKS LIKE

Photo by A. H. Bowen

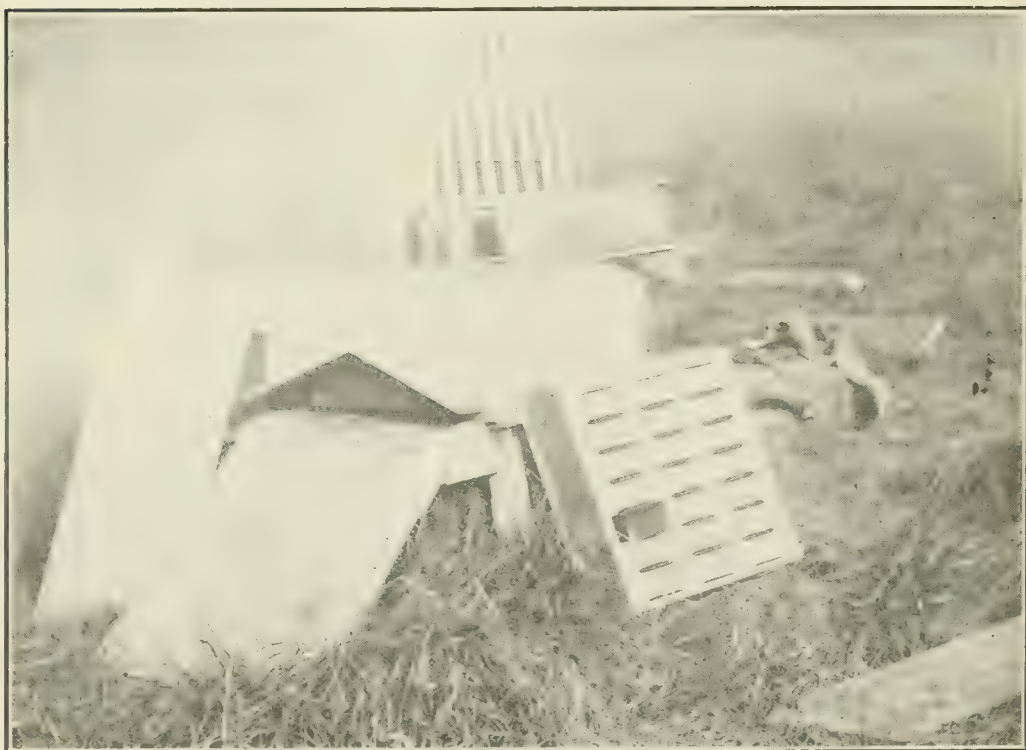
over the bee garden, "it would be agin' natur' to get 'em back when they wanted a change o' air." Then peacefully enough the weeks of sunshine go by until with the gathering of the sheaves from the golden stubble, the beemaster prepares to garner the last harvest of the year, that of the honey. As September would he would "take up" from his unpaid laborers the fruits of their work among the blossoms.

And in the chill of an autumn evening, the poor old bee skep with its living contents would be lifted from its stool and placed

over a pit with the deadly rag of lighted sulphur. As the stifling fumes rose among the combs you might have heard a quiet sob as the honey makers reaped their unjust reward for a season's toil.

"Ah! See we're robbed and murdered in that pit.

Lies the still heaving hive! at evening snatch'd,
Beneath the cloud of guilt-concealing night
And fixed o'er sulphur; while not dreaming ill,
The happy people in their waxen cells,
Sat tending public cares, and planning
Of temperance for winter poor; rejoiced
To mark full flowing 'round their copious stores.
Sudden, the dark oppressive stream ascends;
And used to milder scents the tender race
By thousands, tumble from their honey'd domes,
Convuls'd and agonizing in the dust."



AN OLD FASHIONED SKEP
Apiary on the Cotswold Hills of England
Photo by A. H. Bowen

Apart from this one tragedy there is a peculiar charm to the old-fashioned system, and to all the bee-lore and superstition that went with it. With "taking up" time past, a train of work followed, that kept the cottager's wife busy for days.

There was the draining of the honey from the comb—slow

work in those days—the making or brewing of honey wine, a favorite and delicious drink, and the rendering of beeswax. In the cool kitchen would stand a row of brown earthenware pans into which the honey dripped from cheesecloth bags, hung from a rafter in the low ceiling.

The whole place would reek deliciously with the honey smell. Ah, there was a joy to beekeeping then, in spite of the difficulties, which were soon forgotten when the draining part was over.

We love to think of the old bee gardens of the country-side—sunny nooks of blossoms where the hives stood year in and year out amidst such confusion of flowers as can scarce be imagined. But the years come and go, and with them have passed much that was treasured by the old time skeppist; little indeed being left us to keep green the memories of ancient beekeeping in the days gone by.

Are Italians Hybrids ?

O. H. TOWNSEND, Otsego, Michigan.

I was very much interested in the picture of Mr. Howe's home apiary shown in a late issue of the Review, as well as his writings in connection with it. I agree with him that it pays well to look to the improvement of our stock of bees, especially should our queens be reared from the kind that are given to storing honey, instead of those prone to swarming. But where he makes the statement that the "Italians are hybrids to start with" I have to disagree with him. He also says that he "never saw a queen of what we call pure Italian blood, but what would show a variation in her drones and queens." Well I have seen and owned such queens, that is those that did not show such variation, and have also received queens from Italy that were decidedly impure.

I also received three queens direct from Carniola, Austria, only one of which seemed pure, for two of them showed some yellow bands, while the other one was the true steel gray color, the bees of this one were very fine, and of much better disposition than were those that showed the yellow bands.

The three band test for purity in the Italian is a very poor test indeed, as the workers may all show three and some more than three bands, and yet be impure. In fact the bands may be there on all the bees from queens of known impurity, just as Mr. Howe states, but I never saw any such bees of as good disposition as the really pure Italians. The drones from queens of just a dash

of black blood, are very irregularly marked, some showing much of the yellow color, and some quite the reverse.

In the spring of 1879 and for fourteen years previous to that year, I had the common black bees only, nor were there any other kind in my neighborhood which was in the township of North Shade, Gratiot county, Michigan. In the spring of 1879 I purchased an imported Italian queen of the Dadants (I think the price was \$10.00) and I am sure it was the best bee investment I ever made. That queen must have been a pure Italian for all her drones were duplicates of each other. One's first impression would be that they were too dark in color to be Italians. I reared a good many queens from that one and none of the drones of this imported queen, or of her daughters ever showed any different markings. They were not exactly the color of the common black kind, but a little on the leather color cast, but no yellow bands or clouds of yellow as seen on drones of impure stock.

In the fall of 1882 all the bees in the "North Shade Apiary" were pure Italians and many of the queens were from daughters of the imported one.

My experience while rearing queens for my own use, and for the trade was that the queen's progeny from a pure queen mother, was uniform under uniform conditions, but it must be remembered that the conditions are seldom uniform early in the season, and some queen cells would not be as well protected by the bees as others and any chilling of the cells will cause delay in the queen's hatching, or emerging from the cell, also such queens are always darker than those that hatch on time, but I could never see that this delay in hatching impaired the value of the queen except in beauty and they are somewhat harder to find.

If conditions were uniform and right all the queens from one batch of cells would hatch on the thirteenth day from the time the queen cell building was started, but for some reason the cells are not all properly protected, in the nuclei after being removed to their respective little hives. Early in the season some queens would be one and two and even three days late in hatching, and the very late ones were always very dark in color.

All queen cells were built in very strong full colonies, eggs furnished in strips of comb in right proportion for cells just three days after they were laid by breeding queen, the larvae were stolen four days later, from all but the best looking cells, bees immediately moving royal jelly to the queen cells containing larvae. These cells produced queens for business for three to four years to come.

One favorable time in June one such strong colony of hybrids built fifty-two cells. I removed the larvae from all but twenty of the largest ones and on the thirteenth day the twenty hatched, and all were laying in due time and if there was any difference in them I could not discover it.

I am with Mr. Howe in considering the dark Italians better than the light colored stock.

Well do I remember a beekeeper, coming to my place to purchase some queens, who was particular to say he wanted the lightest colored ones I could furnish. I asked him if he was looking for just beauty. He answered, "No, but I want as near pure stock as possible." He said he had all the dark leather colored ones he wanted and was sure that all such were only hybrids. He wanted some that would not sting so much.

I then approached a hive containing a strong colony of pure Italians, had no smoke or smoker, removed cover, jerked off the quilt (I used quilts then) and blew my breath all over the bees in top of the hive. He looked very much surprised, his first words being, "Why, those are black bees." He could see the very dark leather colored bands. He also immediately changed his mind on the hybrids score, and said he wanted queens of just such stock as that, and if any one would treat any of his bees like that they would sting everything near.

Many years ago we were told that if all the worker bees showed three yellow bands that they were pure, and it might be necessary to place some of the bees upon a window to be able to see all the bands.

In my long experience with the Italian bees I have had several colonies of bees, the pedigree of which I was sure enough to know that they were not pure, where there could not be found any young bees, the progeny of the queen of said colonies but that showed at least three distinct yellow bands and many with four such bands. The drones of these colonies would never be uniform in color, but would show a great amount of yellow on many of them.

The following I consider the only pure test for purity. The young bees are the ones to test, as with the old or field bees there are apt to be some bees from other hives that got into other hives than their own, by mistake.

These young bees on their combs that have as yet never flown from their hive, are sure to be the progeny of the queen in their hive. They should not only plainly show three distinct bands, be

they light or dark bands, but should appear alike in markings and must all show distinctly narrow rings of fine hair of light color, over the back part of their bodies. Also should show no dark streaks or spots in the yellow bands—uniformity in appearance, and markings, being one of the main tests of purity.

Bees that will stand the above test, are pure Italians, the progeny of a pure queen, mated to a pure drone, and there is (in my estimation) no need in wearing a bee hat or veil in handling these bees. If of the dark or leather colored stock, I believe they have not been beaten in honey gathering.

I believe the above directions for testing the Italian bees are about the same as given to me by Mr. Frank Benton away back in the seventies, and its use has enabled me to see any signs of impurities in Italian bees. Mr. Benton has without a doubt had a larger experience with the Italians as well as other races of bees in their native lands, than any other man in our ranks.

I should be pleased to know what he thinks about the Italians as to purity of the race.

Honey Day

GEORGE W. WILLIAMS, Redkey, Indiana.

We dedicate certain days to the celebration of past events of noteworthy character, and others to the cultivation and promotion of great Social, Religious, Economic and Patriotic ideals.

We have Christmas day to inspire us spiritually, Decoration day and the Fourth of July to renew our patriotism, Labor Day and Arbor day on which to pause and consider things material.

Then we have Thanksgiving, which we all most seriously observe in a happy, genial, semi-religious, wholly epicurean manner and give tribute to the bounteous dispenser of all our blessings, both spiritual and temporal.

Along with these praiseworthy occasions of rejoicing and giving of tribute, it is eminently fitting that we pause and devote a moment to the consideration of one modest little factor which goes far to make our country what it is and our people what they are and to devote to the modest honeybee a little share in the thank-offerings of word and viand to be offered on the fourth Thursday of next November.

We have Christmas day to inspire us spiritually, Decoration owe her. We are indebted to her untiring labor for the apple, pear, peach and all the kindred fruits. The clovers and the legumes

are directly indebted to her and her cousins for their very existence. The pumpkin pies for Thanksgiving would be unknown except her majesty and her close kin scattered the pollen to the blossoms. The cucumber, tomato, and the other kitchen garden vegetables would become extinct but for her, and we would have left only the onion, potato and the carrot.

In all these and a thousand similar ways our little friend puts us in her debt by her untiring industry and unflagging energy. In view of the manifold blessings conferred on us by our little friend, it is fitting that we pause and pay a tribute to her in the manner and in the spirit of Thanksgiving Day. Let us all on the 25th day of next November eat a little honey. Eat it in the manner and in the spirit our forefathers ate their Thanksgiving offerings. Eat it to give us spiritual and physical power to bravely meet the battle of this world and to face the responsibilities of the next.

The Beekeepers' Review:—

From my experience I could have told you, you cannot sell much honey in large lots by mail, at any price. You will occasionally sell a can, as I do, but the bulk of your orders will be for the smallest size you advertise, just as there are vastly more small packages of other foodstuffs sold in stores.

Evidently you tried to get forty-five cents or better for a three pound can. My experience says it cannot be done, and I spent good money finding out what price would make sales.

I have a great advantage in making selling prices, as wife has the postoffice here, and it actually costs me but two cents to mail a three pound can into first and second zones, and three cents into third. In this way at forty cents for a three pound can I make the difference between two cents for postage and three cents plus for can, or eleven and two third cents the pound. However, I get the same price in the store, which, the number of sales being equal, makes the honey bring me twelve cents the pound. It is the same with the five and ten pound containers.

I am this season putting up some six ounce jelly tumblers, which will mean fifteen cents a pound for the honey, or very close to it. I have not yet solved the problem of stopping capillary attraction leakage, and may have to get a machine to cap the tumbler with a rubber ring to stop leakage.

* * * *

I have invented the verb to "demaree." I use a modification of the Demaree method to prevent swarming, in that I demaree

(Concluded on page 386)

The National Beekeepers' Association Inc. And its Affiliated Associations

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If you are a paid-in-advance member of one of the above associations, you are a member of the National Beekeepers' Association in good standing until the end of this fiscal year without additional expense. If you are NOT a member of one of the above associations, you should be. Send \$2.00 to Secretary Wesley Foster, Boulder, Colorado, which will pay for the Beekeepers' Review and your National and local dues for a year. Do it today, waiting is dangerous! If more convenient, the order can come to this office.

Conditions in Cuba

D. W. MILLAR, Holguin, Cuba

Given at the National Convention, Denver, February, 1915

"Conditions in Cuba" the subject which you have asked me to write about, is one upon which volumes have been written, and perhaps no two writers have ever agreed.

It is not my intention to impose and say much about conditions here, except as they apply to beekeeping, but to make myself understood it may take me away from my subject in some cases. In referring to Americans, I mean all English speaking foreigners who are here.

Most Americans located in the rural districts were brought or induced to come here by colonizers both from the United States

and Canada. These colonizers bought the land cheap, in large tracts and sales of same, in many cases, were made in the north, without the buyer ever having seen Cuba. This accounts for some of the failures to make good. Other failures are due to location and land that was picked for colonization. This may sound like lots of failures, and there have been many come here who have never broken even, but in no single instance do I know where Cuba should be held responsible for the failure. This explains why many bad reports about beekeeping in Cuba have come from settlers who have picked poor locations for bees, and their reports, given without reference to any particular location, give a general impression that is as unjust as it is untrue.

Cuba has the land in quantities, as good as there is under the sun and still cheap. Soil that is virgin and as rich and deep as one could wish for. Likewise it would be hard to plan a market with as many easy, and cheap avenues to all the world's markets. The climate of Cuba simply can not be equalled, never too hot and never too cold. The temperature will range on an average from 50 to 90 Fahrenheit. There is very little sickness, especially around Holguin, which has gone down in history as the healthiest place on the island. There are I believe no poisonous reptiles or insects here. As yet there are but few flies and mosquitoes, so few that the most of our houses have neither screen doors nor windows. (Mine has no doors or windows of any kind, just the openings where they should be.) There are however, my friends, places in Cuba where you would find it most unhealthy and alive with insects and other pests to annoy and torture you. The man who locates in such places in my belief has no more kick coming than the one who plants a grove on Sabana land (Sabana land is level and without much growth of timber or drainage and is very poor shallow soil, this was sold for fruit groves, in some cases, because of its being cleared and ready for the plow, which it was pointed out was a great saving in both time and labor.) One can live in Cuba better and for much less than it would cost in the United States, I mean, by better, that the native kind and way of preparing the foods is better for you than our northern style. Too much meat is not good. Vegetables are cheap, likewise fruit of many kinds and varieties, both cultivated and wild, some of which are always in season. If one must live and eat like he has done at home in the north, he had better stay there. Likewise, if he cannot change the whole island to his way of thinking and doing. There is just one thing wrong with Cuba and that is, it's too easy to make a liv-

ing. If land were taxed it would make it necessary for the native to become more steady. Even the desire for new and costly things, that are being imported, has already had an effect on him in many places.

From the above description it is only natural that flowers will grow here the year around and that it is an ideal place to handle bees, not only for honey, but queens and the production of wax looks like a big thing to me, but some further experimenting will be necessary before I can say much about this authoritatively. There are many locations open here where it would never be necessary to feed bees and where brood rearing could be carried on during all months. The honey produced here is to my belief equal in quality to any produced in the United States and our "CAMPANILLA BLANCO" yields a superior honey in flavor to your White Clover. (I feel safe in making this statement by proxy.) "Campanilla" is the Spanish botanical name for Bell flower, of which there are many kinds, colors and sizes, none of which, to my belief yield much nectar that the bees can get to, except the "Campanilla Blanco." Honey from this is famous among the natives. In the comb it appears white in color, but extracted the same honey is of a rich honey color (cream or pinky), varying a little to extreme light amber. There are always so many other flowers in bloom at the same time and to get my Campanilla crop I must sort all frames for four to six weeks and uncap only a portion of many frames in making this extraction. The bloom of the Campanilla vine lasts from sunup to between eleven a. m. and two p. m. New flowers come on daily for perhaps three or even five days, then the vine rests a day. Samples of my honey and wax will be exhibited at your convention next year, everything permitting.

Cuban beeswax is equal to any other, but because of the process of melting etc., much of it as sent abroad has a very dark color.

Honey today is selling for fifteen cents per gallon here. That is the price being paid by exporters who collect the honey from small producers. This is easily explained. Our honey all comes under the head of West Indian product and the bulk of it is strained, taken from log hives and handled in a very crude way, likewise dirty, and without any regard to its ripeness. This honey quickly sours.

In addition to this some buyers add a certain per cent of boiled cane juice before it is exported. Now instead of your bee journals lamenting the damage this honey is doing your markets, why don't you make laws prohibiting the importation of all strained

honey. This would help you and the really deserving West Indian producer. The producer of honey from log gums does not merit much help. The fact that my honey is West Indian, should not make it bad, but it does to the average buyer abroad. I am however just as well satisfied now, as I always have been, that I will always find a good market for all my own honey, and so can any one else who will try and who will stick to honest methods and the production of pure, clean and ripe goods. The present war has had its effects, as what were our best markets are now closed. For this personally I am very glad, because it has made it necessary for me to now find a good and permanent market in the United States and much closer at home.

So far, I am in the class mentioned above as not coming out even in their business, but my failure to do this has been due more to my rabbit's foot than anything else, and in no way is it a reflection on the possibilities. First I had my bees burned up during a so called revolution, because I just happened to be where a guard house and two or three shacks were fired, no other damage to speak of being done any place around and nobody was hurt. Your person and property are just as safe, if not more so, than they would be in the United States. Last season I had my entire crop of honey and wax on the way to Germany when the war broke out and it is still there as near as I can guess. The longer I stay in Cuba and the more I learn, the more I think of the prospects and possibilities, aside from its being the most delightful place in the whole world to live.

Queens can be produced here in January and February as good as at any other time of year, and, in a small way I expect this season to make some tests, that is I will mail a limited number of queens, one to any reliable beekeeper, as early as he can use her, free of charge, providing he will give her a fair trial and tell me what she has shown in his locality. If I can produce the quality suitable for northern uses, I can supply the quantity at any time. Upon the result of my experimenting this year will depend the future of this feature of the business with me. To my belief there is no foul brood here and my queens will be mailed in cages supplied with Fondant from a reliable dealer in the United States.

Aside from the bee industry or in connection with it there are many excellent opportunities for the practical farmer with moderate means. One can in a good location grow almost anything, any time, with irrigation and proper drainage. We have two seasons, summer or wet and winter or dry. As in other countries however, the seasons cannot always be relied upon. The summer

just past we had no rain, but at that and extracting as close as I had in June, it was not necessary to feed my bees. The practical beekeeper, farmer, stockman or poultry raiser, with sufficient capital, needs have no fear about making good in Cuba, provided he looks over the field before he locates, because if he is practical he will know what is good when he sees it. Don't come here broke and don't locate permanently until you have looked over the island thoroughly.

Although not in the lead perhaps in development, Oriente Province is without doubt the best in Cuba for the farmer. This may not apply to tobacco growing and some few other pursuits, not to be thought of by the small man.

We are in a way, all subject to a long standing imposition, in the way of having poor, shoddy goods pushed on us. The manufacturers in trying to find a market for this class of their goods are not entirely to blame, as the Spanish merchant figures his profit the same on a poor article as he does a good one and sells more, naturally, to a certain class, but he cannot see ahead to where it is going to hurt him, or force the individual to do his own importing. Some of your best known bee supply houses likewise unload poor hive parts or queens on us, then hide behind their reputations and let us squeal, but this need only happen one time.

In summing up the whole situation I cannot see where a beekeeper in Cuba has not in every way a great advantage over the northern man or any one who has bees in either a cold or a less fertile region. Surely the only exception there could be, would be the man of growing family and it is true that English educational and social advantages are not much in the interior. I can land my honey in New York, England or Germany for less than ten cents per gallon for transportation from my apiaries five miles from the nearest rail road station, and I have some nectar yielding flora 365 days each year, but of course not always in sufficient quantities to give me a surplus. With the hope that this has not tired you too much and that the season you will soon be entering will be a good one for all.

There are two facts worthy of mention that may help some who might be locating in Cuba. First the "Cypress" hive is away yonder the best for our climate (I use Kretchmer goods) and Dadant's foundation is in a class by itself, and nothing that we can buy here can touch it, my bees will, with Dadant's and others placed in frames alternately, draw out every frame of Dadant's before the other is touched.

A Glimpse at Florida--Her Beekeeping and Her Bee-Flora

PROF. EDWIN G. BALDWIN, Deland, Florida

Given at the National Convention, Denver, February, 1915

While the winds of winter howl about your doors, here in the frozen North-west, or pile the fleecy snow high over the sleeping bees in your bee-yards, come with me on a bee-line express, away down south to Dixie, to the land where the sweet magnolia blooms, and the bees instead of sleeping, may gather surplus in December!

We shall not stop off even at the picturesque and poetic Suanee, we shall not halt till we reach Florida, land of sunshine and mosquitoes, land of flowers and land sharks, land, of which all have dreamed, and heard so much, but of which most know so little at first hand. And especially true is it apiculturally, that you must know Florida first hand, if you would really know the state. Yet, as we go, I may give you a little moving picture of things, which will whet your desire to know more. If so, I shall not have written this, or taken your time, in vain.

Florida's peninsular position, almost kissed as she is by the Trades winds on the west, and lapped by the Gulf stream on the south and east, gives beemen there greatly varying conditions. In fact there are really five Floridas, so far as honey sources, and general conditions are concerned. In New York, for example, or Pennsylvania, or Illinois, beemen work under more or less similar conditions, at least, under conditions of honey flow and climate, that are approximately alike. Not so in Florida. Florida is much larger than you imagine, geographically. Almost 400 miles she reaches, toward the west and south from the northeast corner, Fernandina. Her five divisions, are of course more or less overlapping, but are still really distinct. We pause first over the fields of the Partridge Pea, and the Chinquepin, in the north, where the honey is so plentiful, and so unpalatable. To our right stretches the land of the Apalachicola and Chipola rivers, where the Titi and the Two Tupelos, the White (Nyssa Ogechee), and the Black (Nyssa Aquatica), make the beemen happy, about every other year, keeping them hoping the year between. The Tupelo honey is the only honey, of any great commercial amount, that will not candy or granulate. If it is unmixed, altogether, it will not granulate under most trying conditions. Its flavor and color and body leave little to be desired. Not much can be said however, of the Titi; it is dark, and red, and good for stimulating purposes or the baker's

ovens. We might characterize this section as the section, where the bee yards stand on stilts and the hives float off and swin about now and then for variety! Ask Marchant, Isbel or Alderman, they can tell you. Honey production there is somewhat of a gamble. But, in spite of all that, it is one of the most important sections of the beekeeping of all Florida.

Skip with me again over the high pine lands of the northern and central portions, and visit the southern two-thirds of the state; you are now in the great orange belt of Florida. It is here that the largest crops of orange honey, that we get, are secured. While our yields do not reach those of California, they are annually on the increase. It is here that the beemen must contend with conditions, and enemies different even from those further north, and other than those in the extreme south. Orange honey is and has always been a scarce article, nor will it ever be a drug on the market. In Florida our orange trees bloom so early that we have hard work to build up colonies to be boiling over with bees in time. And unless they are booming, the orange trees may unfurl their white petals, like sails to the air, in vain; for the cool nights and the often windy days make nectar gathering extremely problematical, one year with another. Oranges bloom with us from the early part of February to the last of March, depending on the section and the year, while in California it is nearly a month later. I know not how it is in California, but with us, we must practice stimulative feeding if we are to secure an annually large crop of this rarest and choicest of honeys. Our yields average, I presume, about fifty pounds per colony from this source. It is less, if anything. Again it is much more difficult to secure our orange honey pure and distinct from all other honeys, than it is in California, for example or than it is to secure Tupelo, for example, or Mangrove. For in the orange belt many other minor sources bloom simultaneously, or overlap the bloom, either earlier or later; these are usually dark and inferior, and make it hard to "sift" the pure orange, as it were. We must extract promptly, and often a little before the orange is done blooming, if we would not mar the clear transparency and limpid amber of our orange blossom honey. And, again, the remaining darker honeys in the brood chambers of our hives will often darken the lighter orange, unless we extract the hives clean just prior to the opening of the orange flow. But, when we do have our choice honey, oh My! It is hard to imagine a finer flavored honey in the world. I am sure you gentlemen from California will jump up "mad as hornets," when I tell you, that I think our best

Florida orange blossom honey is a trifle better flavored even than your best from the Golden Gate; but honestly and truly I do think it. I base this assertion on ten years of tasting of the honeys from both sources. I am supposing, of course, that I get your best Californian honey, when I receive samples of it from the Redlands section; I have done so, getting honey from Mr. Lefler, and others, and there is just a wee bit something lacking of the exquisite aroma, the boquet of the blossoms, that I do find in our honey. But we won't quarrel over this. And, after we have said all we have, is it not odd, that in Denver, for example, and in many other sections, the trade will not stand for orange honey? They soon tire of it; why I know not, unless for the same reason, that a man can't eat quail for a month in succession—too rich! The best yield I ever had from this source alone was something over 200 pounds.

Then take a side step with me, and stop down along the east coast. We begin about the 29th parallel, say about Daytona, and pass along the Indian River, on down toward the southeast point of the state, and on around the Keys, up along the western shores as far as Tampa. This is the land of the Black Mangrove. We may get into our launch, for all the time we are in salt water. For the Mangrove must have its feet near enough the sea to get its daily salt bath. It grows only on the shores, marshes, lagoons and inlets, hammocks, and lake-shores, anywhere that the brine of the ocean makes brackish the waters about its roots. It is the *Avicennia Nitida*, or Black Mangrove, not the red, which latter produces no nectar. They are both the greatest land formers known, gathering the floating debris along shore and making it fast, till it finally extends the shore line further and further out to sea. It was frozen down in the "Big freeze" of 1894-95, and it is but now approaching once more to its old-time dimensions, not yet quite having become a tree. It is now, in the neighborhood of Daytona, as high as 14 and 16 feet tall; further south, it was not frozen, for a slight distance along the southern coast, and giants 30 feet tall may still be seen there. Odd as it may seem, it never has yielded in the south or on western shore as it has on the east coast, and near the northern limits of its habitat, at that. Here, say from Daytona south to Titusville, is where the largest records ever recorded were secured. Here it was that 600 pounds were obtained from Mangrove and Palmetto in one season, from a single colony! Think of that, you who boast your great yields. It is but now beginning to count once more among our sources of nectar. Last year, I may say, it was practically a failure all along the coast. We look

for better things this year. The honey is rather thin in body, but good in flavor, color about straw hue. If not allowed to ripen well, it will ferment. Alas for the beeman who in overambition extracts his Mangrove honey too soon. At New Smyrna one season, it was no uncommon sight to hear a "pop" of a giant size, and see honey flung over everything about the depot for many feet, from a bursting barrel of unripe mangrove honey—I might say, nectar; for if fully ripe, Mangrove honey is as "safe" as any toy pistol, and even a child can play with it.

Before the freeze, the region from Daytona to Titusville was verily the Mecca of beemen; hither "trekked" the apiarist from the inlands, near Apopka and Leesburg; hither came in lighters with their bees the men from the northern counties, after the orange bloom, to this land of humming bees swarmed the launches from the southern waters, coming even as far as from Miami and Palm Beach. I may conclude this portion on the Mangrove honey by saying, that when it really is producing well, it is practically impossible to overstock a field. A bee can secure a load from a single blossom and "then some."

Side by side with the Mangrove, but also covering the shores of all rivers and lakes of the interior, grow the tall and stately Cabbage Palmetto, their "fans" (the leaves) rattling in the wind. Almost equally extensive, coextensive even, is the saw palmetto, called "scrub palmetto" locally. The latter is low growing, the trunk crawling along earth, burying itself even in the top layer of leaves and earth. While the flatwoods are covered with the saw palmetto, still it does not yield much honey unless large and luxuriant in growth; that means that only the places named, shores and lakes, are the sources of this honey. That from the cabbage palmetto is white, almost water white, but thin; the flavor is exquisite and mild, a popular honey if secured pure. The great honey, perhaps the best in Florida if unmixed, is that from the saw palmetto. It is lemon hue in color, pure and clear in its transparency, thick as molasses in January, and of a flavor fit for kings. It is a honey customers never tire of, and always ask "I want some more of that Palmetto honey; that is fine!" All these honeys candy early, unless we except the Tupelo, which is unique. The Mangrove candies most easily, the saw palmetto next, and the orange next.

We must not leave our dear old state without taking a peep at the plant that is attracting much attention from our beemen at the present time. I refer to the Pennyroyal. It grows over the south-

ern third, possibly half, of the state, rather irregularly; abundant in some places, for example, about Bradentown, and scarce in others of same latitude. It ought to be called the honey plant royal. Where it is abundant it finds the hives empty in December, and leaves them full of honey and bees in time for orange bloom. It is white in color and excellent in flavor and body. It seldom fails to yield, for four months at a time, unless forest fires have been too abundant; then it does not yield. For the plant does not yield the first year, but little the second, and is at its prime only after the third year. Therefore the cattle men with their mad desire to burn anything that will burn, to make pasturage for their cattle on the range, are a great menace to the apiarist who is counting his pennyroyal honey before it is garnered. Right now, in the vicinity of Fort Meyers, on the west coast, the bees are swarming from Pennyroyal bloom, and have been for a month or more. I wish we had it all over our state.

These five honeys are our main flows. These five are largely from trees; note this. I have called Florida the land of "Tree honey." Tupelo, Orange, Palmetto, Mangrove. Can you beat it? There are scores of other minor sources; but these five, (all trees save pennyroyal) are about all that ever produce in sufficient quantities to appear commercially. Show me another state, that has five honeys equal to these five.

In conclusion, let me say to you, before you take the airline express homeward, that with all our great honey sources with our great possibilities, we are disorganized, (I might say unorganized). There is not a single association of beemen in the state—think of it! I confess it with shame. Think of the hundreds of tons of fine honey shipped out of the state every year, and not a beekeepers' association in all the length and breadth of our land of flowers. "Why not?" you ask. I think it is because of two reasons; first, because of our newness; and second and most of all because of a sort of pioneer feeling that still prevails among the beemen here, that of the pioneer anywhere; he always dreads the approach of neighbors, and fights shy of encroachments, he wishes to exploit the virgin soil and forests for himself alone, is jealous of newcomers, and does not wish to have the facts of his section become known. This is, true of many sections but not of all, I am glad to say. A spirit of fellowship, of being brethren, is growing. I make this prophecy; in 1925 the National will meet with us. Come down and help us organize. This is our parting wish, as your gauzy winged express hums you away, back to your sleet and snow "For we be all brethren."

Selling Extracted Honey Direct to the Consumer

JOHN KNESER, West Allis, Wisconsin

Editor Review:—

I have read with interest some of the interesting articles in the September Review. It certainly would be interesting to have the opinion of beekeepers who sell honey direct to the consumer in five and ten pound pails as to what should constitute the price, or what should be the minimum price per pound or pail.

I know that a large number of beekeepers believe as I do and that is, that \$1.25 is much too low for a ten pound pail.

In Sears & Roebuck's catalogue I notice the following prices: 5 pound pail, 83 cents; 10 pound pail, \$1.57. I am getting more than that but there are others that get much more and sell it by the ton, too; (but only put up in five and tens).

If Sears & Roebuck get the above price for their California honey we certainly ought and can get more for our good clover and bass-wood honey.

(We are glad to give place to the above letter, for it shows a growing sentiment among producers of extracted honey to sell direct to the consumer. This is a fitting time just now to launch the enterprise, when the large buyers seem determined to "bear" the price unreasonably low. Put up a good article of table honey in five pound and ten pound friction top pails; then charge a living price, so wages can be made during the time of putting it up and selling and delivering. We cannot conceive a condition where one could sell honey in five and ten pound packages direct to the consumer for less than 12½¢ per pound and it is presumed that more would be necessary, under some conditions. Ed.)

(Continued from page 375)

my colonies every three weeks to prevent swarming and to stimulate the bees to do their best, and they do it. Today I have three to four supers on forty-two hives. Some hives have two L. ten-frame hive bodies for supers, others the L. supers with two shallow supers, extracting, five and eight inches deep. The latter Danz. hives converted. (I never think of a Danz. hive but what I want to swear.) I have taken off one-hundred-fifty pounds from four hives for immediate sale, and while some were but three-fourths capped the most of them were entirely sealed and a couple of days in the tank put the honey in good shape to send out.

I am putting Caucasian bees in. Argument.

This is the fourth, in succession, day of rain and everything is sodden. If I can have three weeks of bright, warm weather between now and September first to fifteenth, I'll have four thousand pounds more honey, I think.

Yours truly,

DR. A. F. BONNEY.

Buck Grove, Iowa, 7-28-15

We copy as follows from the U. S. Monthly Crop report for September 15th, 1915.

Honey Production and Trade

The total production of honey this year is about 12 per cent greater than last year, according to reports received September 1.

The total foreign imports during the fiscal year ending June 30, 1915, were 303,965 gallons valued at \$124,843, compared with 75,079 gallons the previous year, valued at \$38,665, in addition to imports from Porto Rico and Hawaii to the aggregate value of \$130,431, compared with about \$125,000 last year.

The increased imports are from the West Indies and Mexico principally, and result largely from interference with their usual European market as a result of the war abroad.

Exports made during the fiscal year ending June 30, 1915, were valued at \$114,038, compared with \$136,000 for the previous year.

United States Sugar Imports

Sugar received into the United States from island possessions and foreign countries amounted to 3,643,000 short tons during the year ending June 30, 1915, or 233,000 tons more than in the preceding year. Of the 1915 receipts, 2,392,000 tons came from Cuba, 154,000 from other foreign countries, 640,000 from Hawaii, 294,000 from Porto Rico, and 163,000 from the Philippine Islands. In the fiscal year, 1914, Cuba supplied 2,463,000 tons, other foreign countries 11,000 Hawaii 557,000, Porto Rico 321,000, and the Philippine Islands 58,000.

Guelph, Canada, Sept. 10th, 1915

Dark Honey Crop Report

The Crop Report committee of the Ontario Beekeepers' Association met on Thursday, Sept. 9th., to consider the crop of Dark Honey. It was found that 105 members had reported 116,400 lbs. from 5,807 colonies; being an average of 20 lbs. to the colony. This is about double of last year's average. The committee advises members to ask 7½¢ to 8½¢ per pound wholesale, depending on the size of package and the quantity sold in one order. No buckwheat honey should be retailed for less than 10¢ per pound.

The local demand for white honey is exceedingly good as many people are buying to put away instead of canned fruit and the prices recommended by the committee are being realized.

Wholesalers are cautious about buying all lines of goods, including honey and naturally have made an effort to buy as low as possible. A few large orders have been filled at a slightly lower figure than recommended, but these orders were for ton lots.

There is yet a large quantity of light honey unsold, but the market is firm and a great many of the smaller beekeepers report their crop all sold at prices recommended by the committee. All considered the committee feels that honey need not be sold below prices recommended.

Signed by the Committee:

Wm. Couse,
H. G. Sibbald,
W. J. Craig,
Morley Pettit, Sec.-Treas.

Denver, Colorado, Sept. 10, 1915.

Editor Beekeepers' Review,
Northstar, Mich.

On page 325 September Review we see the following remark, "A few sections in each case may weigh less than the stamped net weight but in this event enough sections in the case must weigh enough more to make up what the short weight sections lack." We would like to be informed where you got your

information from, that the federal authorities will allow this. The rules formulated by the committee and of which rules we have a copy, positively state that no tolerance will be allowed in the weight of comb honey while there is a tolerance allowed in bottles of extracted honey. As we are considerably interested in this matter we should like to hear from you by return mail and would consider same a great favor.

Yours very truly,
The Colorado Honey Producers' Ass'n.
F. Rauchfuss, Manager.

FR-HA

(We had no authority for saying sections of comb honey would be admitted in a case weighing less than they were stamped, providing the aggregate weight of the case was sufficient to make up any shortage caused by the light weight sections. We got the Glass containers mixed with our Comb honey suggestions. The only tolerance allowed is in Glass bottles of extracted honey. It is like this: It seems impossible for the glass manufacturers to make their containers all alike so there is a variation in the amount the different containers of the same description will hold, thus the tolerance. In this case your net weight stamp must not be more than an average weight of, say a case as sold to a grocer. We hasten to make this correction. Ed.)

Had it occurred to you that it would come in handy this year to receive a cent a pound more for your honey than if sold through the old channel, to the large jobber? If you have been jobbing your honey too cheap in past years, list your honey in the free to subscriber list in the next number of the Review, and if you have a good article your desire can be realized. Try it this year and be convinced. Remember that a cent a pound figures \$10.00 on each thousand pounds sold, worth looking after, isn't it?

A Manual of Bee Husbandry by Elmer G. Carr, Deputy of the State Entomologist in Bee Inspection of New Jersey is on my desk.

It is a 72 page bulletin issued by the State Board of Agriculture, treating on Beekeeping in New Jersey. The Manual seems to be well gotten up and we recommend it to the New Jersey beekeepers as well worth their perusal. Mr. Carr, besides being one of New Jersey's bee inspectors, is also one of the Directors of the National Beekeepers' Association, also Secretary of the New Jersey State Beekeepers' Association.

We take pleasure in copying from the State Register, South Dakota, under date of July 3, 1915 as follows:

"On Wednesday the new fiscal year began and with it Hon. T. M. Goddard representative for Sully, Hyde and Hughes counties took charge of the Soldiers' Home at Hot Springs, as commandant. Mr. Goddard succeeds ex-Congressman W. V. Lucas, who declined to serve longer in that capacity. Mr. Goddard was born near Troy, Iowa, November 24, 1846. At the age of 16 he enlisted in Company E, Third Iowa Cavalry, and served until the end of the rebellion. He attended school at the Troy academy and Iowa State university and has a diploma from the law department of the latter. He practiced law at Centerville, Iowa, from 1847 to 1883 when he moved to Sully county and took a homestead. He has resided there ever since. He served twice as district attorney, three terms as county judge of Sully county, and is now serving his fourth consecutive term as representative in the legislature. Half his life has been spent as a member of the board of education of his home district."

(Mr. Goddard is one of South Dakota's foremost beekeepers, and it is hoped he will have time with his additional duties to see to his fifty swarms of bees. Ed.)

If you ask a good fair price for your honey then "hustle" and secure it, you not only help yourself, but the fraternity at large. It is never too late to begin!

The Beekeepers' Review,
Northstar, Mich.

Monticello, Ill., Jan. 8, 1915

Dear Editor:—It seems to me that an attempt is being made to do too much for the money asked. National members are now getting their membership in both local and National Associations beside the "Review" for quite a little less than they could be obtained under former arrangements. And yet the National is doing several things for its members which it has not done before. For instance, I can buy a case of 60 pound cans about 12c cheaper through the National than in any other way of which I am aware. If I buy about 13 cases in a season I save the whole cost of membership and Review combined. Surely the beekeeping public ought to be willing to pay a better price for its service than that, especially when the money is put into the hands of prominent men in the Apicultural world whose reputation for honesty and efficiency is well known. Some beekeepers advance the argument that we should ask more for honey for the reason that a low price creates a bad impression on the prospective purchaser. Be that as it may isn't it possible that the same argument might apply to the N. B. K. Ass'n. For my part I would not consider \$1.00 for each association and a like sum for the "Review" exorbitant. If the beekeepers and to get the benefit from this co-operative movement they must expect to pay the cost. It certainly ought not to be an unprofitable investment.

Very truly yours,

C. S. WATTS.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has, for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. EASTERN LABEL COMPANY, formerly Pearl Card Co., Clintonville, Conn.

FOR SALE—15,000 lbs. extra quality white clover extracted honey in new 60 pound tin cans, two in a case for shipment. This honey was left upon the hives until after the close of the season before extracting, consequently, is of superior quality. A sample will convince you. Address, J. N. HARRIS, St. Louis, Michigan.

FOR SALE—Water white Alfalfa, White Clover, Amber Alfalfa and Amber Fall honey in 60 pound cans or smaller packages. Amber Fall honey is of our own extracting and can also be furnished in barrels. Write for sample of kind desired and state quantity you can use. DADANT & SONS, Hamilton, Illinois. tf

FOR SALE—A carload of white clover extracted honey, in new 60 lb net tin cans, two in a case for shipment at only 8c per pound, on track. This crop of honey is in New York state, and if a sale of the entire crop can be made to one purchaser, a liberal reduction will be made. For further particulars and sample, address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

FOR SALE—White extracted honey 7c, light amber 6c, two 60 pound cans to case, 12 five pound pails in a case, for \$6. or a case of six ten pound pails for \$6. Honey in pails is light amber and all honey is well ripened and mild flavor. H. G. QUIRIN, Bellevue, O.

CHAS. ISRAEL BROS. CO.

486 Canal St., New York
COMMISSION MERCHANTS

Dealers in Honey, Beeswax, etc.

We get you the Best Market Price for your Produce. Write us for further Particulars.

WANTED—Comb extracted honey and beeswax. R. A. BURNETT & CO., 173 So. Water St., Chicago.

WANTED—Extracted honey, send sample and price in large and small lots. FLOYD MINICK, Cochranville, Pa.

WANTED—Choice grades comb and extracted honey. Send sample and state quality, how packed and the lowest price. H. H. THALE, Maywood, Missouri.

WANTED—A car or less of White Clover, Raspberry and Basswood extracted honey, in 60 lb. cans. Also glassed comb honey. I. J. STRINGHAM, 105 Park Place, N. Y.

FOR SALE—Twenty-two cases, two 60lb net cans to the case, of amber extracted honey at only 5½c per pound on car in Pa. This is a shipment of Texas amber honey, rather better for baking purposes than table use, still some may be able to use it for the latter. The Review has taken over this bunch of honey in settling up an account for one of our subscribers. We can furnish a small sample from this office to intending purchasers. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Choice White Clover Extracted Honey for Sale

Left upon the hives until thoroughly cured by the bees; put up in new 60 pound tin cans, one and two in a case for shipment. This thoroughly-cured-upon-the-hive honey is a little higher in price than the ordinary, something in comparison with creamery and the ordinary store butter. I quote a price of \$6.00 for a single can, or 9 cents per pound in lots less than ten cases, two cans to the case. For ten cases or more the price will be 8½ cents per pound. Above prices are free on board the cars here. Sample free. Address, D. R. TOWNSEND, Northstar, Mich.

FOR SALE—Ten cases of two 60 lb net cans of beautiful white clover extracted honey, at 10c per pound. New cans and cases. Sample free. Address RAY C. AUSTIN, Ashley, Mich.

FOR SALE—Fancy sweet clover extracted honey in cases of 120 lb net at 7c per pound. In cases of 12-5 lb friction top buckets (pails) @ only \$5.00 per case. 60 lb net. Send cash. VIRGIL WEAVER, Falmouth, Ky. tf

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

BEES AND QUEENS

FOR SALE—40 colonies bees; mostly carniolans; 10 frame hives; heavy with stores. N. S. Burner, Sellman, Maryland.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. EASTERN LABEL CO., (Formerly Pearl Card Co.,) Clintonville, Ct.

FOR SALE—A good Bee location. For information address GEORGE PARKS, Errington, P. O., B. C., Canada.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

HONEY LABELS of the better sort. Lowest prices.. Honey advertisers that sell your honey. Printing for Beekeepers. Catalogue free. LIBERTY PUBLISHING COMPANY, Sta. D, Box 4J, Cleveland, Ohio.

4000 gummed labels 1¼x2¼ printed in two colors, \$1.00. Eat Honey labels 1000 for 30c, 5000 for \$1.00. Estimates free on all class of work. LABEL SHOP, 186 Meadow Street, New Haven, Connecticut.

HONEY JARS FOR SALE—About twenty gross, square glass honey jars, glass top and spring fastener, from one-half to two pounds. In original packages at less than factory prices. Have quit the bottling business. W. H. SETTLE, Gridley, Ill.

WANTED—Healthy young man, farm reared preferred, to work with bees. Experience not necessary. Intelligence, honesty and sobriety imperative. Married or single. Excellent permanent opportunity for right man. D. W. MILLAR, Holguin, Cuba.

WANTED—Back numbers of "Beekeepers' Review" as follows:—1906 January and August; 1907, January, March, April, May, June, July, August and December; 1908, March; 1910, November; 1914, March and April; 1915, March and July. Will pay 15c per numbers on delivery. M. C. RICHTER, Belota, California.

FOR SALE CHEAP—In good location 32¼ acre farm, nice house, good barn, stable, sheds, workshop, 50 stands of bees, extra hives, etc. For full information address J. A. JANSSEN, R. F. D. 4, Charlevoix, Mich.

Six Pound Glass Jars for Honey

This half gallon Flint glass container has a screw cap about the same size as a mason jar. This jar has a special lacquered screw cap, about as good as could be devised for honey, and we can furnish them four dozen in a case at 7½c each, or \$3.60 per crate, f. o. b. Washington, Pa. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Has one of those large dealers who pay out thousands of dollars in advertising, thus securing tens of thousands of names of producers, then send out circulars to this great array of producers asking them for their very lowest price on your crop, receiving replies and offers on perhaps a hundred times as much honey as they can possibly use, they buying the bargain lots offered, have one of those fellows got a "grip on you" (?). If they have we pity you, for you are receiving only a part of what your honey is worth. Come! get in with us, we need you!

We have made arrangements whereby we can club the Reliable Poultry Journal and the Beekeepers' Review, both for a year at only \$1.15. The Reliable Poultry Journal charges 25c additional to Canadian subscribers for postage.

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using Eureka Paste. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Chicago comb honey has been arriving freely of late and prices are really weaker owing to the absence of free buying on the part of retailers who are holding off for cooler weather. However, some of the receivers feel they must sell very soon after it arrives and consequently are selling at lower prices than are quoted herein.

The market on A no. 1 to fancy grades—17c to 18c per pound, with sales chiefly at 17c per pound; no. 1 at 16c per pound, with amber grades ranging from 13c to 15c per pound. That which has not been built with separators and is undesirable because of mixed colors and pollen scattered through the combs sells at from 9c to 12c per pound.

Extracted is also arriving freely with very little demand. Prices ranging for white from 7c to 9c per pound, according to kind, package and quality with the ambers from 5c to 7c per pound.

Beeswax is dull at 28c to 30c per pound, with stocks accumulating.

R. A. BURNETT & CO.

173 W. South Water St.
Chicago, Illinois.

Sept. 15, 1915

Bee Meetings Next Fall

Some time ago a committee was appointed to arrange the dates of next winter's conventions on the circuit plan as far as possible. Several months have been required to arrange the dates to the satisfaction of all concerned. The States joining in the circuit and the dates

on which convention will be held are as follows:

1. Ohio Nov. 26-27.
2. Illinois Nov. 29-30
3. Kansas Dec. 1-2.
4. Missouri Dec. 3-4.
5. Minnesota Dec. 7-8.
6. Wisconsin Dec. 9-10
7. Indiana Dec. 10-11.
8. Iowa Dec. 13, 14, 15
9. Michigan Dec. 15-16.
10. Chicago-Northwestern Dec. 17-18.

From the above dates it will be seen that conventions will be in session continuously excepting Sundays. By this plan, speakers of prominence will be able to attend a number of conventions without inconvenience. If the dates could have been conveniently arranged, less travel would have been necessary by having adjoining States follow each other. Some dates were fixed and the other meetings had to be adjusted to them. It is to be hoped that the circuit plan will prove so popular that somewhat more convenient arrangements may be possible another year. The location of the various State conventions will be announced by their respective secretaries. Some locations have apparently not yet been selected.

FRANK C. PELLETT.

Honey Wanted

The list below are Producers who have sold out their own production and desire to buy honey to supply their increasing demand, listed in this column without charge. Dealers can be listed in this department at the regular advertising rate of 50c each insertion.

J. C. Wheeler, 921 Austin Boul., Oak Park, Ill.

Hoffman & Hauck, Woodhaven, N. Y.

H. H. Thale, Maywood, Mo.

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each has for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Robert E. Foster, Rifle, Colorado, 200 to 500 colonies.

Frank Willmert, Elmore, Minn.

Queens of MOORE'S Strain of Italians

PRODUCE WORKERS

That fill the supers quick
With honey nice and thick.

They have won a world-wide reputation for honey gathering, hardiness, gentleness, etc.

Untested queens, \$1.00; six, \$5.00; 12, \$9.00.

Select untested, \$1.25; six, \$6.00; 12, \$11.00.

Safe arrival and satisfaction guaranteed.
Circular free.

I am now filling orders by return mail.

Queen-breeder. J. P. MOORE,
Route 1, Morgan, Ky.

ADDITIONAL HONEY AND WAX

FOR SALE—Finest quality white extracted honey in nice 60 lb cans, 2 in a case at 6½ cents per pound F. O. B. Cochrane, Ala., JOE C. WEAVER.

FOR SALE—Fine quality Raspberry-Milkweed honey in new 60 lb cans (2 in case). Write for sample and price. P. W. SOWINSKI, Bellaire, Mich. tf

Los Angeles Honey Co.

633 Central Bldg., Los Angeles, Calif.

Buyers and Sellers

OF

HONEY AND WAX

Write us for prices when you are in the market

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

If you do not patronize the buying department of the Review, you and the fraternity are the losers. You because you lose direct, the fraternity, because the more we buy the cheaper we can buy, See?

THE BEEKEEPERS' REVIEW THE BEEMAN'S OWN PAPER--DO YOU PATRONIZE IT AS YOU SHOULD?

NATIONAL ADVERTISING SEALS



The above seals, printed with bright red ink and gummed, furnished at 30c. per thousand and postpaid. Advertise Honey, Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to

EASTERN LABEL COMPANY
Formerly Pearl Card Co.,
Clintonville, Connecticut.

Beekeeping

Dr. E. F. Phillips' new book **Beekeeping**; edited by L. H. Bailey is the latest out. It contains 457 pages divided into 24 chapters with Appendix and is illustrated with 190 engravings. While the author says the book is not intended as a text book, still it covers nearly the whole ground of beekeeping, and much of it from a scientific standpoint. The fact that it is the production of our Dr. Phillips of the Department of Agriculture, Washington, D. C. is guarantee enough that the book is authentic, so one need not hesitate about reading it with the expectation of being well paid for the time spent in doing so. It is published by The MacMillan Co., New York, price \$2.00, postage extra. It can be had through the Review office at the above price.

We have made arrangements with the publishers so we can club it with the Review a year, both for the price of the book, \$2.00 but to get this very close price postage must be included on two pounds from New York City. Your postmaster can tell you the parcel post rate to New York on 2 lbs. Address with remittance,

The BEEKEEPERS' REVIEW, Northstar, Michigan

Beekeepers' Review,
Northstar, Mich.

Thought I would drop you a line to let you know that I received the honey cans some time ago and that I am more than pleased with them, in fact they are the finest honey cans I ever received and the cases are so strong there was not a single piece lost or broken. Please also accept my thanks for the dollar returned on discount. Hereafter I shall always order my cans through you.

With best wishes, I remain sincerely yours,

G. A. BARBISCH.

Review Subscribers Having Honey For Sale

We are herewith submitting a list of subscribers having honey for sale. This list includes those only who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale and the letter "C" following the address indicates they have comb honey for sale and the letter "E" extracted, both letters indicating the subscriber has both comb and extracted honey for sale. This list is published free to paid in advance subscribers to the Review. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

Geo. A. Hummer, Prairie Point, Miss C.
L. T. Rice, Brookville, Ky. E.
J. P. Moore, Morgan, Ky., E.

HORSEMINT

W. C. Collier, Galoid, Texas E.

AMBER

S. E. Miller, Rhineland, Mo., E.
M. W. Harrington, Williamsburg, Iowa E.
J. M. Cutts, R.F.D. No. 1, Montgomery, Ala. E.
J. C. Stocks, 328 Park St., Grinnell, Iowa. E.

ALFALFA

M. D. Phillippe, Elgentro, Calif., E.

BUCKWHEAT

Thos. Phillipi, Johnsonville, N. Y., E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
N. L. Stevens, Venice Center, N. Y., E.
W. D. Wright, Altamont, N. Y., E.

SPANISH NEEDLE

J. VanWyngarden, R. No. 4, Hebron, Ind., E.

WHITE CLOVER

Frank Murray, Chase, Michigan C & E.
D. R. Townsend, Northstar, Michigan E.
A. H. Fralick, Homer, Mich. E.
E. B. Rosa, Monroe, Wis. E.
E. A. Doney, Dixon, Iowa, E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
C. H. Burrows, Oran, N. Y., E.
G. Dahlen, Marmony, Minn. E.
W. M. Peacock, Mapleton, Iowa, E.
A. S. Tedman, Weston, Michigan, E.
A. S. Crotzer, Spena, Ill., C.
Howard Honey Co., Tyre, Michigan, E.
Irving Pierce, Union City, Michigan, E.
Geo. Dodds, Cambridge, N. Y., E.
O. H. Townsend, Merritt, Michigan, E.
N. L. Stevens, Venice Center, N. Y., E.
Thos. Phillips, Johnsonville, N. Y., E.
W. D. Wright, Altamont, N. Y., E.
J. C. Stocks, 328 Park St., Grinnell, Iowa. E.
Theo. Gentz, Shawano, Wisconsin. E.
W. S. Pangburn, Center Junction, Iowa-C&E

CLOVER AND BASSWOOD BLEND

Oscar Kazmeier, Kiel, Wisconsin.
Irving Pierce, Union City, Michigan, E.
N. L. Stevens, Venice Center, N. Y., E.
F. W. Lesser, Rt. 3, East Syracuse, N. Y. E.
F. E. Matzke, Juda, Wisconsin. E.
W. D. Wright, Altamont, N. Y., E.

TRADE

The REVIEW is now buying all kinds of beekeepers' supplies for the subscribers. We get wholesale prices on all supplies, returning nearly all the difference between the list price and wholesale price to the subscriber ordering. It is the desire of the REVIEW to make only enough out of the supplies bought for the subscriber to pay postage and the cost of advertising. This scheme is so liberal that ALL ought to take advantage of this buying privilege.

Never before in the history of beekeeping have the masses had the privilege of buying their supplies at near wholesale prices, and a person is very short sighted to pay the LONG CATALOG PRICE for his supplies when this privilege of buying at the lower price is open.

Have you got into such a "rut," that you MUST order your goods through the OLD HIGH PRICED channel or are you progressive enough to break away from the "Ties that bind" and come over into the new and better way of buying, i. e. that of buying collectively. Some one has said that it would "take one hundred years to educate the people to the importance of buying collectively.", About ten percent of beekeepers are NOW educated up to this standard and are taking advantage of this grand privilege, and this appeal is to the other ninety per cent who seem not to be able to comprehend that there is a possibility to make their dollars go further than through the OLD, OUT OF DATE way of buying individually.

The dealers will "tickle" when they hear you say, "I'm from Missouri, I have to be shown" for they know the one uttering these sentences is so far behind the times that he will live in the "old rut," to the benefit of the dealer and finally drop out, without ever receiving a single benefit from cooperation. DO NOT BE THE ONE TO STAND BACK TO BE SHOWN, but come to the front and be one that will say "We will show them," and take the word of your old friend Townsend, that we will win, AND IN LESS THAN A HUNDRED YEARS, too.

We hope to add another 10 per cent to the already well pleased 10 per cent that are now buying through the REVIEW, before the end of the year, will you be one of them to save a few dollars by this collective buying!

It would be a "cold day" when Roderick Cameron, Shabbona, Michigan, would buy his supplies otherwise than through the Review, for there is a reason, listen:—On August 13th, he placed an order with the Review for \$30.00 paying 12½ per cent of it with two rebate checks he had received from previous orders. He will get a nice rebate check on this last order, so you see we will have an "endless chain," so to speak, with him (and others too) for you see he could not afford to buy through other sources, where no rebate check would be forth-coming.

Virgil Weaver, Falmouth, Ky. bought 100 cases of 5 lb friction top pails, 12 in a re-shipping case for which we quoted him a special price of \$55.00 per hundred. After making him this unheard of low price, he received back a rebate check of \$3.00 when we mailed him his bill. Do you remember what you had to pay for tin containers before the advent of the National and now the Review has taken hold of this proposition for the producer! Don't you begin to see the possibilities of buying collectively? The Review is now no doubt the largest distributor of Tin Containers for Honey in the world. Is it any wonder that when we ask manufacturers (we buy direct of the manufacturer) for their price on tin containers, that they "take notice" for they know that their answer may make or lose many thousands of dollars in trade. Patronize the bridge that carries you across safely. No matter what any one quotes you for your supply business, we can likely do as well, or better. At any rate you will be used very well.

We could go on and fill this number of the REVIEW with similar instances of well pleased REVIEW customers who have saved all the way from a dollar to \$30.00 on single deals they have bought through the REVIEW, but space forbids mentioning others at this time. You may think you are getting a very close price through the dealer you have been buying of along back, but all we ask is for you to send us the same money you have been paying in the past, you saying of whom you bought, we will take the money and buy at the very closest price possible, returning you the difference, if any. Do not write asking for prices, as we have none, but just make out your order as usual, inclosing the usual amount of exchange, say whose goods you want and we will do the rest.

A trial order will convince you. Hereafter, address all orders for beekeepers' supplies of every sort to

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

Golden and Three Banded Italian Queens For Sale

The Review has made arrangements with the following queen breeders to furnish Review subscribers with queens at their price, listed in other part of this number of the Review. It will be noticed that the list is of the most reliable breeders we have at the present time, and we take pleasure in offering their stock as the very best obtainable at any price, not excepting imported stock. We have spoken for a goodly number of those fine queens, so can promise our readers very prompt delivery at the present time.

The Mr. John M. Davis strain of three banded Italians needs no introduction at this time, his 43 years experience as a breeder for the market has placed his fine stock far above the average, and the beauty of it is, he promised to ship all queens almost by return mail. Order through The Review to be sure of this very prompt service. The price we sell at is given in his advertisement on another page.

Mr. J. P. Moore strain of three banded queens is world renowned for gentleness, hardiness and good honey gathering characteristics. Mr. Hutchinson used to say there was **none better to be had**. Mr. Moore has promised us that he would mail queens by return mail to Review subscribers. An order through the Review would insure prompt delivery.

Mr. Ben G. Davis, breeder of the "Davis" famous "Goldens." Mr. Davis in his strain of goldens has combined honey gathering qualities with beauty and gentleness. There has more favorable comment reached the Review office regarding "Ben's" goldens, as disease resisters than any other breeders. This means that they are a hardy and industrious strain. Ex-Director Buchanan says "they are the best disease resisters I ever saw." Mr. Buchanan was State inspector of apiaries of Tennessee for several years and ought to know. Mr. N. E. Franes says "They are wonderful disease resisting bees." If you are in an European foul brood location, it would look as if this strain would be the one to select as "good housekeepers" to fight this disease with. Mr. Davis has promised to mail Review orders promptly, by return mail.

In requeening this Fall, mail all orders to **THE REVIEW, Northstar, Michigan.**

Honey and Queens

\$16.00 Gets 32 Gallon Barrel Chincappi Honey.

\$20.00 Same amount either Poplar or Black Tupelo Gum Honey.

\$19.20 Gets Carrier of 8 24 lb Cases Fancy 12½ oz. and Better Light Amber Comb Honey.

\$18.00 Same Amount and Quality 11 oz. sections.

\$16.50 Same Amount 10 oz. Lighter Weight 10c lb.

\$ 5.00 Tested Grey Caucasian Queens, Best Stock \$1.50 each.

J. J. WILDER, Cordele, Ga.

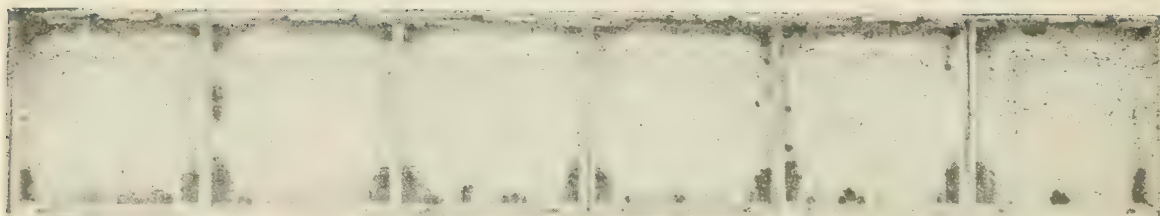
Our 1915 Crop of White Clover Extracted Honey For Sale

TOWNSEND'S ULTRA-QUALITY

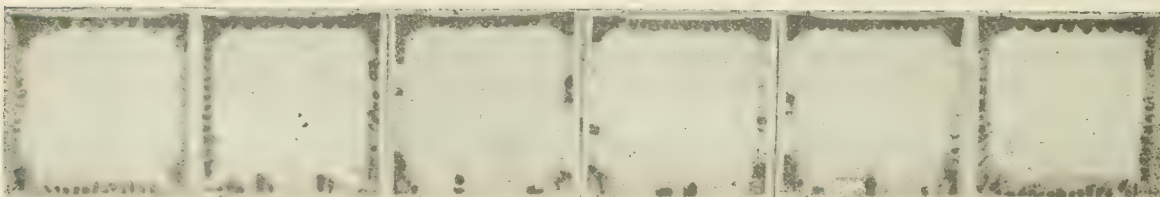
Gathered from the clean meadows of old Gratiot County, where hardly a single other blossom can be found, except the White and Alsike clover, we can this year offer Clover Extracted Honey in its purity. In the production of this crop of honey, we offer you our forty years' experience in learning how to produce the **very best quality of honey from the very best honey nectar producing plant in the world**, White and Alsike clover. Combs are provided, so no honey is extracted until it is thoroughly cured on the hive, by the bees. Besides this, our honey is produced in **nice clean white combs**, above queen excluders. Last Fall, these white combs were cleaned of all honey adhering to them, by the bees, lest there should be some little old sour honey from last year mixed with this new crop to impair its flavor. Rich, ripe, roapy, are some of the "pet names" given our honey by the consuming public. Of course, this Clover honey, handled as we do, would naturally be of a most delicious flavor, aroma, boquet. As usual, this 1915 crop of Ultra-quality white clover extracted honey will be canned in brand new, bright, shiny, tin cans, containing 60lb net weight, and crated one and two in a case for shipment, the bulk being crated, two in a crate. It costs some more to produce Townsend's Ultra-quality honey, than the ordinary extracted honey upon the market, then as it is evaporated down so close and heavy body, we do not get so many pounds by this process, consequently have to sell it for a little advance over regular stock. We quote you this fine stock as long as it lasts F. O. B. our station as follows: one 60lb net can cased singly of this best stock at \$6.00 per can; in cases of two cans, one to nine cases inclusive, at 9 cents per pound; 10 or more cases at 8½ cents per pound. Sample free.

Our **binding guarantee** is that if Townsend's Ultra-Quality extracted honey is not as good honey as you ever bought at any price, or, if for any reason you do not care to accept it upon arrival we will gladly take it off your hands and refund your money, including all freight charges. Could we offer more! Of course you will realize we could not make this offer if our stock of honey was "just ordinary" but Townsend's Ultra-quality extracted honey is not of the ordinary kind, so we do not fear the results of this binding guarantee. Remember there is but one Townsend's Ultra-Quality extracted honey and to secure this splendid brand address

E. D. TOWNSEND & SONS, Northstar, Michigan, U. S. A.



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

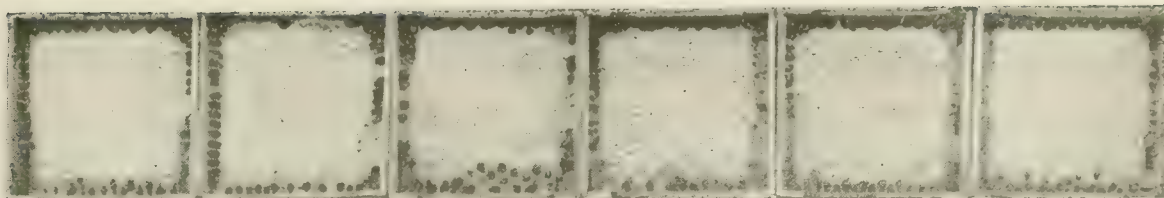
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

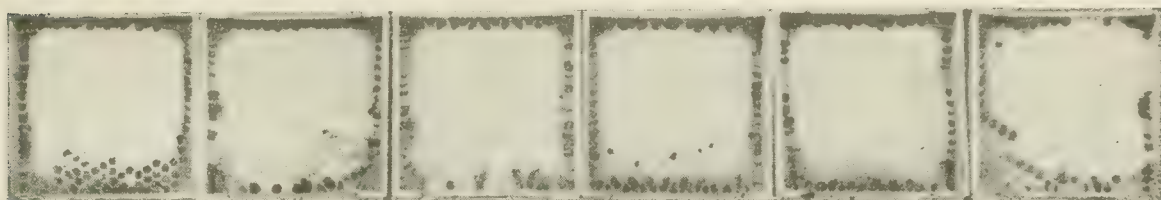
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

I. COMB HONEY

FANCY—Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than 12 1-2 oz. net, or 13 1-2 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 12 1-2 oz." The front section in each case must be uniform color and finish and shall be true representation of the contents of the case.

NUMBER ONE—Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be uniform color and finish and shall be a true representation of the contents of the case.

NUMBER TWO—This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES—Honey packed in second hand cases. Honey in badly stained or mildewed sections. Honey showing signs of granulation. Leaking, injured or patched up sections. Sections containing honey dew. Sections with more than 50 uncapped cells, or a less number of empty cells. Sections weighing less than the minimum weight. All such honey should be disposed of in the home market.

II. EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W" "L. A." "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

III. STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES—Extracted honey packed in second hand cans. Unripe or fermenting honey, weighing less than 12 lbs. per gallon. Honey contaminated by excessive use of smoke. Honey contaminated by honey dew. Honey not properly strained.

"falcon" BEE SUPPLIES

SHIPPING CASES, EXTRACTORS, HIVES, ETC., EVERYTHING FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. FALCONER MFG. CO., Falconer N. Y.

Where the Good Bee-Hives Come From

W. H. LAWS' ITALIAN QUEENS

There are no better bees than Laws' Italians. Twenty-seven years careful breeding. My bees have taken premiums in my own and others' hands in many of the states of the Union. A single firm having bought over 6000 queens from me in past seven years say, "Your queens are very satisfactory." A queen-breeder who is using my breeding-queens says he could well afford to have paid \$25.00 each for such queens ten years ago. Untested queens, 90c; 12 for \$9.00; 100 for \$70.00. Tested queens, \$1.00; 12 for \$10.00; 100 for \$85.00. Select tested, \$2.00; 12 for \$18.00; 50 for \$50.00. Breeding queens, a large number of as fine queens, tried and tested, as breeders, each, \$5.00; six for \$25.00. Prompt attention to all correspondence.

W. H. LAWS, BEEVILLE, BEE COUNTY, TEXAS

The Pearce Method of Beekeeping

Adopted at the Michigan State Prison with J. A. Pearce as Manager

You will be pleased to learn that I am in charge of the Michigan State bees at the Jackson Prison. The State farms comprise about 3,000 acres. It is intended to keep a 1000 or more colonies of bees. We have at present 130 colonies in our double 8 frame hives. They will be moved into their permanent houses about October first where they will stand indefinitely winter and summer as the PEARCE METHOD has been adopted by the management. Anyone wishing to know what this method is should send 50 cents to J. A. Pearce, Rural No. 1, Grand Rapids, Mich. for "The Pearce Method of Beekeeping" or \$1.10 to the Beekeepers' Review for the Review one year and the book.

J. A. PEARCE.

Special Prices on 60 lb Honey Cans, 2 in a Case

If you can use 100 cases of 60 lb tin cans, 1 3/4 in. screw, two in a case we have something special both in quality and price to offer. You will miss it, if you buy from other quarters if you are looking for something good in honey cans, at a reduction from regular price. They are shipped from Chicago. Kindly write this office when in need of the very best quality of 60 lb cans, at the lowest price.

The BEEKEEPERS' REVIEW, Northstar, Michigan

Special Price on Friction Top Pails in Re-Shipping Cases

If you can use ten cases or more of any of the following friction top cans or pails in re-shipping cases, we have something special to offer both in quality and price. The list that we can give special prices upon shipped from Chicago is as follows: 2 lb Cans, 24 to the case; 2 1/2 lb Cans, 24 to the case; 5 lb Pails, 12 to the case; 10 lb PAILS, 6 to the case.

Write this office, stating the number and size wanted and we will surprise you with the price we can furnish them for. Always remember that we are working without profit, consequently always quote you the very lowest price available. Address all orders for Tin containers for honey to the point where the lowest price is procurable.

The BEEKEEPERS' REVIEW, Northstar, Michigan

Parcel Post Mailing Cases and Cans for Mailing Honey

They are square syrup cans with 1 $\frac{3}{4}$ in. screw caps, except the quart which has a 1 $\frac{1}{2}$ in. cap. The mailing cases are of heavy corrugated paper, built double, and fulfill all the requirements of the postal regulations. Our case requires no glue or pasting, just telescope the case together after putting in the can of honey, wrap with a heavy cord and it is ready for mailing. Out of thousands in use, not a single complaint of breakage in the mails has been reported. Our case is being used by the U. S. Government, they just now placing their third order. Notice that the price is now some less than formerly.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
$\frac{1}{2}$ gallon can, including mailing case, per crate of 100.....	8.00
$\frac{1}{4}$ gallon can, including mailing case, per crate of 100.....	6.00

We cannot furnish less than a full crate of the above at any price.

Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

Gallon and Half-Gallon Glass Containers for Honey

Of all the containers for honey we have seen, this gallon jug with bail is best. Fill it with rich, ripe, roapy, delicious white honey, and watch your prospective customer's "mouth water" as he beholds the most gracious sweet ever "tickled the palate" of mortal man glistening in its purity, for can't he see it (!) The glass is of pure white flint, consequently, does not obstruct the vision and it is a vision, too, to the would-be customer. But you must see it when filled with honey to appreciate its attractiveness. We have made arrangements to furnish these flint glass jugs with bails f. o. b. Alton, Ill. as follows:

3 Dozen 1 gallon, per crate.....	\$4.75
6 Dozen $\frac{1}{2}$ gallons, per crate.....	7.00
$\frac{1}{2}$ Dozen 1 gallons in reshipping case, per case.....	.80
1 Dozen $\frac{1}{2}$ gallons in reshipping case, per case.....	.60

The two quotations above are for containers each packed singly in double corrugate paper, so single jugs when filled with honey can be shipped singly without other packing. The last two quotations are for retail trade at home, or where a shipment is made of a half dozen or dozen, according to the size of the jugs ordered. They are wide mouth and have American metal screw caps.

Address all orders with remittance

THE BEEKEEPERS' REVIEW, Northstar, Mich.

Tumbler Shaped Jellies

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them

Six oz. Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz.....	\$4 50
Gross in 2 doz. paper reshipping case.....	2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs. honey, Bbl. of 21 doz.....	3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at.....	2 75

Prices are f. o. b. Columbus, Ohio.

Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

The Next Issue of

The BOOSTER will be a HUMMER

It will be chuck full of original poems, special appeals, "Pioneer" bills of fare and other good things, all dedicated to you to copy in your local newspapers.

This matter will be eagerly accepted by them, and will create great interest in our coming "Honey Day."

This is the greatest number yet. It will make everybody "sit up and take notice," for a fact.

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Honey is One of Our Leading Specialties
CAR LOTS OR LESS

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The Only Bee Publication in Canada

It is the official organ of the Ontario Bee-Keepers' Association and has incorporated with it the former Canadian Bee Journal.

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Well illustrated and up-to-date. Subscription price postpaid—

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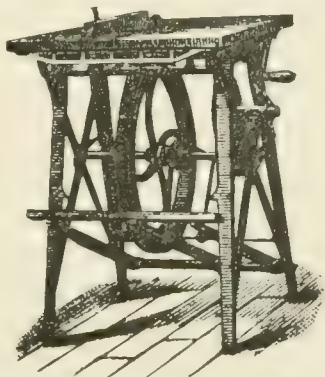
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SAWS

in making their hives, sections and boxes. Machine on trial. SEND FOR OUR CATALOGUE

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84 RUBY STREET

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NOTICE TO QUEEN BREEDERS

If you want to sell Queens and Bees, advertise in the **AMERICAN BEE JOURNAL**. Read what some of our advertisers have to say about the pulling power of our advertising pages:

Got good results from the advertisement I ran in last season's Journals.

D. G. LITTLE, Hartley, Iowa.

We have advertised in the American Bee Journal for thirty years. Have always found it a good advertising medium.

J. W. K. SHAW CO., Loreauville, La.

My advertisement brought all the Orders I wished for. In fact, more than I was able to supply. Quite a number of orders had to be returned.

J. A. SIMMONS, Sabinal, Texas.

The American Bee Journal is a good medium for advertisements. We have had all the Orders booked we could fill.

GOLDEN RULE BEE CO., Rialto, Calif.

The Reasons are self evident—a good bee paper is taken by live and wide awake beekeepers and these are the kind that are always in the market for good bees and good queens.

Rates on space are not high. Display at 15 cents a line or \$2.10 per inch. Classified 15 cents a line.

Send in your order with copy today and get rid of your surplus queens.

AMERICAN BEE JOURNAL
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Have Your Old Combs

CAPPINGS OR SLUMGUM

Rendered by our

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Dadant & Sons,
Hamilton, Ill.

Dear Sirs:

I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Our outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

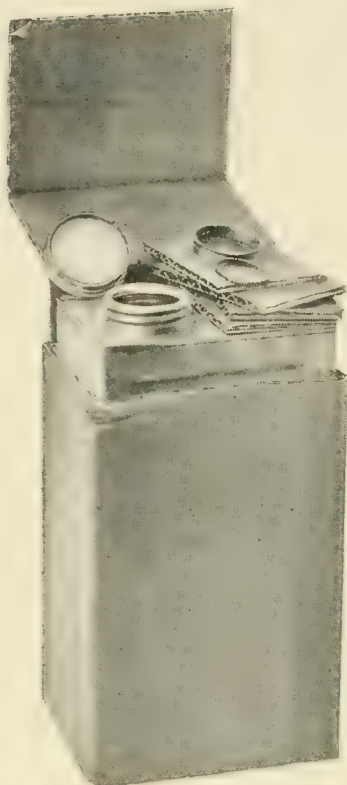
DADANT'S FOUNDATION

Just Now We Offer Attractive Terms on Best Quality
BEE SUPPLIES—Send a list of what you need

DADANT & SONS

Hamilton, Illinois

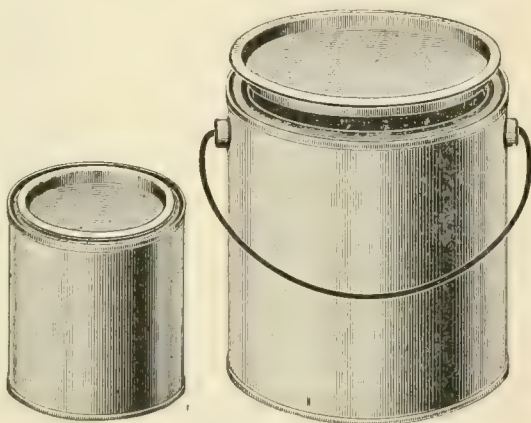
Canco Honey Cans and Pails



PATENTED

Parcel Post Honey Package, oblong can with slotted screw, record seal and rubber gasket. Individual corrugated cartons. 6 lb. and 12 lb. sizes only.

Spencer Friction Top Cans and Pails



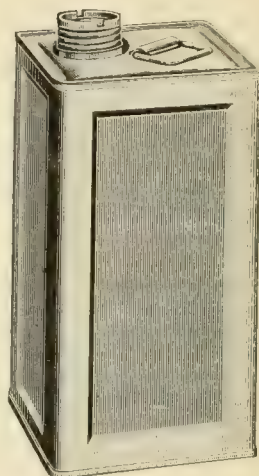
PATENTED

In sizes holding approximately 2 lbs., 2½ lbs., 3 lbs., 5 and 10 lbs.

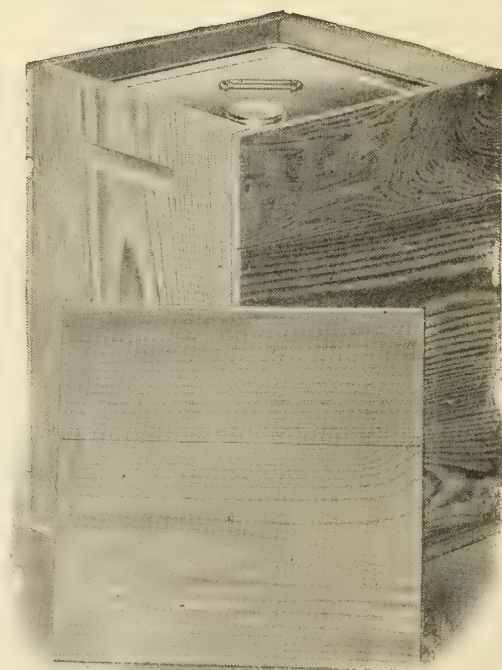
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SQUARE
CRATED
or
BOXED

PATENTED



1 GALLON SQUARE



60 Pound Square

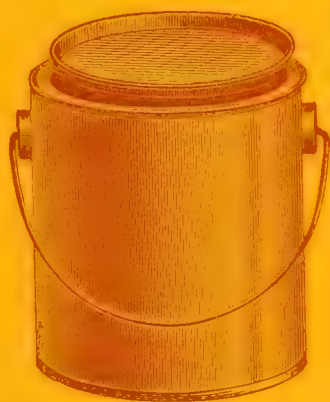
One and two in case.

American Can Co.

New York Chicago
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TIN CONTAINERS FOR HONEY

FRICTION TOP PAILS



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	\$2.25	\$2.15	\$20.00
2½ lb. Can	2.75	2.60	24.00
3 lb. Can	3.00	2.85	28.00
5 lb. Pail	\$5.00	4.75	42.50
6 lb. Pail	5.25	5.00	45.00
10 lb. Pail	7.00	6.50	60.00
12 lb. Pail	7.25	6.75	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans	.....	.71 per case
12 pails in a case, 5 lb. Pails	.....	.65 per case
12 pails in a case, 6 lb. Pails	.....	.70 per case
6 pails in a case, 10 lb. Pails	.....	.49 per case
6 pails in a case, 12 lb. Pails	.....	.55 per case

The above containers are known as "Buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price	.....	\$ .33 per case
2 in a case, price	.....	.60 per case
2 in a case in lots of 250 cases, price	.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price	.....	58.50 per 100 cases
50 in a crate, price	.....	\$10.50 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.		

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @	.....	.60c per case
10 in a wooden re-shipping case @	.....	.95c per case
50 in one large crate	.....	\$3.63 per crate
½ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	\$5.50
¼ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	..	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to Review Subscribers cash with order. Additional discounts in carload lots, which can be made up of an assortment of the different cans and pails if so desired.

Address

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

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Apiculture

The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth.



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MEDINA, OHIO, U.S.A.



The Beekeepers' Review

Published Monthly

NOV.
1915

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NORTHSTAR,
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Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

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Are made right in the timber country, and we have the best facilities for shipping: DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

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Ask for catalogue of Supplies free.

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BEST SECTIONS.
BEST SHIPPING CASES.
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BEST PRICES you will get for your honey when put up in our sections and shipping cases.

"LOTZ" sections and shipping cases have stood the test. Why? Because they are perfect in workmanship, quality and material. Buy Lotz goods when you want the best. Our 1915 catalogue ready January 15th, send your name and get one.

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ST. ANNE, ILLINOIS
Carries a full line of our goods

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10 Cars Comb-honey

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Chicago, Ill.

Honey is One of Our Leading Specialties
CAR LOTS OR LESS

No Risk Doing Business With Us---

Our Financial Responsibility Exceeds \$100,000.00

Have Your Old Combs

CAPPINGS OR SLUMGUM

Rendered by our

High Pressure Steam Wax Presses

Dadant & Sons,
Hamilton, Ill.

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I wish to thank you for remittance of \$1.82 for wax secured from slumgum sent you for trial. All I wished was to know amount you got out of it. Your process is surely away ahead of any home method.

Very truly yours,

F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Our outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

DADANT'S FOUNDATION

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BEE SUPPLIES—Send a list of what you need

DADANT & SONS

Hamilton, Illinois

More Money for Your Honey

WHEN PACKED IN

Lewis Superb Shipping Cases

After you have harvested a nice lot of comb-honey do not make a serious mistake by putting it up ready for the market in a cheap appearing case such as a home-made one or that turned out by a local planing mill. The best and most economical (taking the sale of the honey into consideration) case must be turned out with the same careful workmanship and with the same selection of proper material as goes into the making of first class beehives and honey sections such as we manufacture.

It is an acknowledged fact that comb-honey put up in attractive Lewis Shipping cases will bring from one to two cents per pound more than the same honey put up in poor cases. Do not cheapen your product by inferior cases. You can afford the best—remember your shipping cases are the show windows for your goods. Your honey will bring more money if well displayed.

INSIST ON THE LEWIS MAKE

LEWIS SHIPPING CASES are cut accurately out of clear, sound basswood lumber. All of these cases are neatly packed and include the proper size nails for nailing them up.

G. B. LEWIS COMPANY

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MICHIGAN.....	A. G. Woodman Co.....	Grand Rapids
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NEVADA.....	H. Trickey.....	Reno
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UTAH.....	Foulger & Sons.....	Ogden
WASHINGTON.....	Chas. H. Lilly Co.....	Seattle
PORTO RICO.....	Fritze, Lundt & Sons.....	Ponce
ENGLAND.....	E. H. Taylor.....	Welwyn

The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE
NATIONAL BEEKEEPERS' ASSOCIATION INC.
AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo.

PROF. EDWIN G. BALDWIN, Deland, Fla.

Entered as second-class matter December 9, 1913, at the postoffice at Northstar, Michigan, under the act of March 3, 1879,

TERMS—\$1.00 a year to subscribers in the United States, Canada, Cuba, Mexico, Hawaiian Islands, Porto Rico, Phillipine Islands and Shanghai, China. To all other countries the rate is \$1.24.

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Advertising rates on application.

Forms close 20th of each month.

Vol.XXVIII NORTHSTAR, MICHIGAN, NOVEMBER 1, No.11

The Pennyroyal yield was good last spring, the orange generally good, some places extra fine; the palmetto was about one-half or one-third of a yield and mangrove—well, reports vary. We shall have data later.—E. G. B.

There Will Be No Changes in the National Constitution at the 1916 Meeting

Up to the time this number of the Review goes to press, no notice of a proposed change in our constitution has reached this office. As any changes in the constitution have to be published in the Review ninety days before the annual meeting, it now looks as if none would be presented at that time. One reason why there are no proposed changes in the constitution, is, not one in a hundred knows what the present constitution is, consequently, do not know whether a change is desirable or not, in fact they do not know anything about what your new constitution looks like. We hope to be able to publish it next month.

A National Honey Day

The 25th of this month, November, the first effort will be made toward observing one day each year as "Honey Day." It is presumed that the most enthusiastic supporters of the movement, do not expect to do wonders, this, our first attempt. If we keep in mind that "from little acorns great oaks grow" and each one does his or her "mite" something good will result. Many products of the soil are having National days, like, "Apple Day" for instance, when the papers talk, "Eat some apples tomorrow, for, tomorrow is National Apple Day." You will help along a good cause by eating, cooking and preserving some apples tomorrow, or something similar, the point being to bring before the masses that apples are good to eat and every time anything along this line is mentioned in the press, it stimulates consumption—why not honey? Make an effort to get something in your local paper about the 25th of November being "National Honey Day."

In all the central section of Florida the summer of 1915 will go down on record as an abnormally poor yield of honey, especially from the sources not included in the finer table honeys.

While bees are breeding well they have no surplus and some may even need help in honey from the stronger colonies. It looks as if 1915 were to reach a lower watermark—we mean honeymark—than even 1914.—E. G. B.

It is likely true that the producer is the only one who sells honey too cheaply direct to the consumer, the dealer usually asking a good margin over wholesale prices. It would be a good thing to have a commission appointed whose duty would be to determine a jobbing price, a wholesale price and a retail price for both comb and extracted honey. Such a commission is now working over the line in Canada, with very good results, only (they say) some few will not stick to the price established by the commission. The Canadian commission meet twice each year, the first time soon after the white, or early honey flow is harvested, the second time soon after the Fall honey flow is harvested. The business of the commission is, first, to determine the amount of the crop produced and with this knowledge, establish the selling price for the producer. This is something for the National Beekeepers' Association to take hold of. Oh dear me, there is so much the National COULD do.

We note with pleasure a beautiful new work just from the

press of the MacMillan Company, a new work on "Beekeeping" by Dr. E. F. Phillips. After a hasty survey we are certain there are unique and valuable features in this monograph just mentioned, but will only add, now, that a review of its scope and methods will be made in the columns of the Review at no distant date. Meantime any, who desire it, may secure a copy of the volume from the publishers in New York.—E. G. B.

On page 369 and 370 of the October number of the Review, the titles of the two cuts shown on those two pages have been transposed. "What an English Hive Looks Like" page 369 should have appeared under cut on next page, and "An Old Fashioned Skep" should have appeared under Straw Skep illustration on page 369.

We at this office are not blind to the fact that there have several mistakes occurred in the Review along back, but it is hoped and expected that less mistakes will occur in the future.

The middle of September we spent a day or so in Washington, D. C. enjoying a long-anticipated visit with Dr. E. F. Phillips and his genial assistant, Mr. Demuth. They have ample and excellent quarters on the edge of the city, really in Maryland, not Dist. of Columbia but so far as trolley connections or autos are concerned, really in the suburbs of Washington.

Nearly sixty colonies of bees are on their stands there, all belonging to the Experiment Station. Next to the noble and frank cordiality of our good friend, Dr. Phillips, we enjoyed most of all the insight we gained into the wonderful series of experiments going on there. The thousands of readings Dr. Phillips and Mr. Demuth have taken by means of the thermo-couple, from five hives, on their winter stands, the entrancing discoveries they have reached in a chain of readings recorded from September 20, 1914 to March 20, 1915 by the dozens of delicate wires, conducted from each hive to their indicator-board, all result in an almost epoch-making chain of conclusions regarding the winter cluster of a colony of bees. It must all be seen, and more, explained, to be appreciated. We are safe in saying that it would be difficult to find two men better suited to the work in hand than Dr. Phillips and Mr. Demuth.

We urge any and all, who chance near the capitol city, to turn aside a few hours from the pursuit of business or pleasure and visit the mysterious bee-house at Somerset Heights and see for themselves. There is "something doing" there all right!—E. G. B.

A certain firm that manufactures a corrugated fiberboard box for shipping extracted honey have this interesting note:

"The resiliency of the material from which our boxes are made absorbs the shocks of transportation, and rough handling and the **seal prevents dishonest handlers from robbing the cans.**" The emphasis is ours. In a recent shipment to the north, we found one entire five-gallon can emptied, the contents all gone. As the cans used were all the single round cans, in stout wooden jackets, well braced and nailed **no** damage was done to the **tin** of the can, but the screw cap must have been removed and the honey "extracted" a **second time!** Of course we have put in a claim, but claims are often unsatisfactory, **always** tedious. Who likes R. R. claims anyhow? If the **seal** alluded to above will do the thing, let's have **all** our extracted honey retainers **sealed** for shipment. Why not a good idea.—E. G. B.

Queens of Quality for 1916

Both Mr. John M. Davis and Mr. Ben G. Davis of Spring Hill, Tenn. were quick to grasp the very great importance of having queens as breeders whose progeny were the cream of 1100 colonies during 1915, and we are pleased to announce that we have made arrangements with them to breed queens from four of our very best tested-for-honey queens, mentioned in the October Review as being so superior as honey gatherers, where a dozen or so colonies out of the 1100 we have worked for extracted honey, gathered more than 250 pounds of honey this poor season, in yards that did not exceed 40 pounds per colony, on the average. We do not think, ever before in commercial queen-rearing was such a combination of superior, tested-for-honey strain of bees ever offered for sale. We often hear of large reports of honey being gathered from some favored location under good management, but here is a case of superior honey gathering qualities developed in yards under the **same** management, others having an equal show, fell far behind. We consider ourselves fortunate in securing so good hands to rear our 1916 queens as the Davises. Mr. John M. Davis, having over forty years of successful queen-rearing experience for the trade, surely will do his part grand. Then Ben G. Davis, a "chip from the old block" brought up with the bees, needs no introduction to the honey producer of today. Our breeders sent them are of the three-banded strain of Italian stock, and when crossed with the thoroughbred stock of the Davises, will be second to none in existence.

\$4,750,000 TO BE SPENT THIS YEAR IN FARM DEMONSTRATION WORK

The Smith-Lever agricultural extension act of May 8, 1914, provides for a permanent national system of agricultural extension work to be carried on with Federal and State funds through the State agricultural colleges in cooperation with the United States Department of Agriculture, by means of instruction and practical demonstrations in agriculture and home economics to persons not attending the colleges.

The Smith-Lever Act appropriates money as follows:

(1) \$10,000 of Federal funds annually to each of the 48 States.

(2) In addition to the \$480,000, the act appropriates for 1915-16 \$600,000 of Federal Smith-Lever funds. This sum will be increased annually by \$500,000 of Federal Smith-Lever funds until 1923, when the annual Government appropriation will be set at \$4,580,000. The additional appropriation is divided among the States in the proportion that the rural population of each State bears to the total rural population of the States. Any State, however, to share in this extra Federal Smith-Lever fund must appropriate and spend in extension work at least an equal amount of money from sources within the State. The money from the States will bring the joint demonstration fund to \$1,680,000 in 1915-16.

In addition to the Smith-Lever funds, however, the Department of Agriculture during 1916 will expend from its own appropriations for farmers' co-operative demonstration work and for other direct field instruction in special subjects over \$1,025,000. States will raise from sources within the State and spend for demonstration work at a total of \$2,650,000. This will make a grand total of \$4,750,000 to be spent in the fiscal year 1915-16 in bringing practical and helpful instruction to the farmer and his family in their own communities.

(We are glad to give space to the above in the Review, for we see a possibility of the honey producers being benefited by this Act, providing, we claim our own. Never in the history of our country was there such a gigantic amount of money available for promotion work among the agriculturist as this. Think of it, \$4,750,000 to be spent annually, bringing practical and helpful instructions to the farmer and his family in their own communities. The National and state beekeepers' associations should see to it that we, as honey producers, get our share of the Smith-Lever appropriation spent in representing our pursuit. One or more able men, well versed in brood diseases, as well as general beekeeping should be paid from this fund in each state. Now is the time to act, for if we do not claim our own at the start, it will be harder to make out a case of necessity, later. We see a possibility here in getting at the fellow who will not attend conventions for the demonstrator visits the rural communities, even at their homes in many cases. Every state secretary should make it a point to immediately get in touch with the proper officials, which is understood to be your State Agri-

cultural college. Our National Secretary should take in hand states where no association is formed and see that said state is properly represented by a demonstrator. Then there may be states where for some reason the state secretary does not act, in such case the National Secretary should act instead. Now is the time to "get busy.")

We at this office have just been informed that we are to be furnished with an official copy of our National constitution, as approved by the delegates at Denver last February, in a few days and we hope it will reach this office in time so it will appear in the December number of the Review.

Michigan's Fiftieth Annual Meeting

On December 15 and 16, the Michigan beekeepers will hold their fiftieth annual meeting at Grand Rapids, Michigan.

This meeting promises to be one that will set a new record in interest and attendance, and one that will be remembered by those present as the best ever.

One of the special features will be a banquet supper on the evening of the fifteenth. This banquet is the gift of Messrs. G. B. Lewis, Watertown, Wis., and Messrs. A. G. Woodman, Grand Rapids, Mich. A banquet, at which all the members get together, seems to add a finishing touch to any gathering, and we feel sure the beekeepers will show Messrs. Lewis and Woodman their appreciation by turning out in record numbers.

The program will be brimful of good things and many of the notables of the beekeeping world will be there. Full particulars of program will be published next month.

The headquarters of the association will be the Eagle Hotel. This hotel has been our headquarters on many previous occasions and is well known to beemen. Rooms range from 75 cents up.

Many beekeepers do not attend meetings of this kind because they fail to realize their full value. The program alone will repay the trouble of attending, but this is only a part. The beekeeper who wants to learn more about his bees or about disposing of his crop of honey is usually able to obtain this information in personal discussions with the other beekeepers present. Send us in your questions any time and we will endeavor to answer them in a satisfactory manner at the meeting.

Every beekeeper in Michigan is invited to attend, and is ex-

pected to bring along another beekeeper to join with us in making the fiftieth annual meeting of the Michigan Beekeepers' Association bigger'n ever.

F. ERIC MILLEN,
Sec.-Treasurer.

East Lansing.

Observations on the Comb Honey Market

WESLEY FOSTER, Boulder, Colorado

When Fancy comb-honey costs the retailer \$3.75 a case of twenty-four sections, he must retail it at 20 cents each. This gives the retailer close to thirty per cent profit which most grocers in the west at least feel they must have. At 20 cents comb-honey does not move very fast even though every comb is perfect and heavy weight. During August and September new comb-honey does move with quite satisfactory results at \$3.75 to \$4.00 a case. There is no doubt that new comb-honey has a lusciousness that wears off in two months' time.

Grocers in the west have been slow to split up prices in pennies, but they are coming to it. Comb-honey as yet is not offered at 17, 18 or 19 cents but you do see it offered at two for 35 cents or two for 25 cents. When comb-honey wholesales at \$3.50 it retails at two for 35 cents. When wholesaled at \$3.00 it goes to the consumer at 15 cents. Cull comb-honey retails at 10 cents to two for 25 cents and such honey wholesales at \$2.00 to \$2.50 a case according to weight principally.

Retail grocers in the west now offer such articles as butter and eggs at penny denominations and when they adopt the practice with comb-honey it will be quite a stimulus to the sales.

The low price at which cull comb-honey has been sold has extended the use of comb-honey very much. Last year thousands of sections of light weight comb-honey were retailed at 10 cents and that low price has been a profitable advertising campaign for the honey trade.

Comb-honey is a staple in the west and many grocers buy comb-honey in fifty case lots and extracted honey by the ton. This is as it should be in face of the low prices on extracted honey and the rapidly increasing comb-honey production of the Rocky Mountain Region.

Oct. 15, 1915.

Field Notes from Iowa

J. W. STINE, Stockport

This has been the best season for several years, in some respects, although it has been too wet for the bees to store as much honey as they would have done had it not been so wet. There has been quite a little swarming in this part of the state, although we have not had a natural swarm in either of our yards that we know of.

I believe the prospects of harvesting at least seventy-five per cent of a crop of white honey, (clover and basswood) is good in our section of the state. There is a great amount of heartsease, and Spanish needle, buckbush and other fall flowers and if the weather conditions continue favorable as August is starting to give we will have a good fall flow. The bees are still working nicely in some places.

Outdoor Wintering of Bees

By E. F. PHILLIPS, In Charge of Bee-culture Investigations, and
GEORGE S. DEMUTH, Apicultural Assistant

INTRODUCTION

The beekeepers of the United States lose at least one-tenth of their colonies of bees every winter. This is a minimum loss, which is frequently increased to one-half and sometimes more in certain sections. This decrease is largely due to carelessness or to lack of knowledge, and it is entirely practical to reduce it to less than one per cent, the small loss covering various accidents which cannot be foreseen. An industry which can survive in the face of such a decrease must have great possibilities for commercial advancement when the loss is properly reduced.

An important reason for the unnecessary death of colonies in winter is the belief of many beekeepers that, since unprotected colonies often live over winter, no protection is needed. When, for example, heavy insulation of bees is advocated at a beekeepers' convention, some beekeeper usually replies that he has never protected his colonies and never loses any. His reported success is often unintentionally exaggerated, and he indicates by such statements that he may not know what constitutes moderately successful wintering. Although probably nothing on a farm gives a better return on the investment than do bees if well cared for, the majority of beekeepers neglect them. It need scarcely be stated that the best beekeepers do not follow such a parsimonious and unwise policy.

It is usually believed that winter loss is confined to the northern portions of the country, but this is far from true. The beekeepers of the South lose many colonies during this season, and, peculiarly enough, the decrease in all parts of the United States is due to the same causes in varying degree.

For the past three winters the authors¹ have made a study of the activity

¹ For a preliminary report of this work see Phillips and Demuth, 1914. The temperature of the honeybee cluster in winter, Bul. 93, U. S. Dept. Agr., 16 p.

of bees during the winter and of the effects of various environmental factors on the colony. This bulletin does not include the results of this work, but gives the methods of outside wintering which have proved best in commercial apiaries, all the statements here made having been substantiated by the results of the more detailed studies which are to be reported in other form. There are many factors which require still more study and the doubtful points are not here discussed. It seems best not to include a discussion of the wintering of bees in cellars, concerning which there are many more points in dispute which can be settled only by detailed scientific studies. This omission should not be interpreted as indicating that the authors condemn cellar-wintering; in fact, they are inclined to believe that when properly worked out this method will be found superior in northern localities.

Beekeepers usually report the results of wintering by giving the percentage of colonies in which all the bees die, just as was done in the first paragraph of this bulletin. This is a convenient method but is misleading. If every individual bee that goes into winter quarters remained alive in the spring with no loss of vitality, we should have perfect wintering, but such success is impossible. If out of 100 colonies only 2 die and the remainder are only half as strong in numbers as they were in the fall, most beekeepers would consider this rather good wintering, while in fact it is poor. The criterion of success is to save the greatest possible number of individual bees and to have them capable of prolonged activity in the spring. Beekeepers sorely need a new point of view as to success with this vital problem.

Frequently in beekeeping literature mention is made of the "winter sleep" of bees. Bees can not hibernate as do most insects. While the bees on the outside of the winter cluster are usually quiet, there is incessant movement in the center during cold weather; in fact, the colder the surrounding air, the greater the activity of the colony after a cluster is formed. The phrase "winter sleep" is therefore erroneous and should be dropped from the literature, as it misleads beekeepers.

CAUSES OF WINTER LOSS

The causes of the death of individual bees or of a colony of bees in winter, barring unusual accidents, are only two in number: (1) Inadequate stores and (2) excessive heat production. The numerous factors usually given in the literature on the subject as entirely distinct fall into these two classes, except for some that are usually given which the authors do not believe to be operative.

Excessive Heat-Generation

It was first shown by the authors in the bulletin to which reference has been made that at hive temperatures between about 57 degrees and 69 degrees F. a normal broodless colony of bees does not form a cluster, but the bees remain inactive on the combs. When the temperature of the air immediately surrounding the bees (not the temperature of the air outside the hive) falls to 57 degrees F. or lower, they form a cluster and those in the center begin to generate heat by muscular activity, while those in the outer portion serve as insulators by crowding close together, usually with their heads toward the center of the cluster. The innermost portion rapidly acquires a temperature considerably higher than that of the air about the bees before clustering was necessary, often going to 90 degrees F. in normal colonies and higher in abnormal ones. The number of bees engaged in heat production increases as the outer temperature falls and the insulating zone is consequently decreas-

ed in thickness but becomes more compact. The entire cluster becomes smaller as the outer temperature falls.

If bees can be kept in an environment such that the temperature of the air immediately surrounding them is 57 degrees F. or slightly above, they are saved much unnecessary and unprofitable labor. To the theoretical objection that bees need exercise, it is necessary only to state that the authors have so wintered bees in a cellar as well as outdoors with wonderfully successful results. If bees are kept in a cellar under the best conditions the results are excellent, but it is not proposed to discuss this more complicated phase of the subject here. If wintered outside in a packing case with abundant insulation, any heat generated escapes slowly and the temperature of the air in the hive rarely falls below 55 degrees F. If inadequately protected, the temperature of the hive can not be kept so high and the bees must generate much more heat. In single-walled hives it is common for the temperature of the air around the cluster to fall to freezing or lower, in which event the bees generate an excessive amount of heat and perhaps die when they are no longer capable of the necessary muscular activity. The necessity of packing is thus made clear, and in any locality in which the outer temperature often falls to 40 degrees F. or below it is desirable to protect bees to conserve their vitality. If the temperature should fall to 40 degrees F. only a few times during the winter, this would not be serious enough to make insulation necessary. It is obvious, however, that winter protection is beneficial throughout practically the entire United States.

Necessity of having young bees—Bees may be compared with minute dry batteries, in so far as their vital energy is concerned. They emerge as adult bees with a certain amount of vital energy, and when this is exhausted they die, not having power to recover lost vitality as human beings have. To withstand the hardships of winter under usual conditions, a colony must have many young bees, capable of prolonged muscular work. Obviously the better the wintering conditions, the less necessary it becomes to provide young bees, but even with the most perfect wintering it is desirable that there be plenty of young bees in the fall, so that they will be available for extensive brood-rearing in the spring. This calls for prolonged brood-rearing in late summer. Old bees, which have been worn out earlier and are ready to die, soon succumb from the work of heat-generation.

Danger of weak colonies—In a strong colony many bees in the center of the cluster may be engaged in heat-generation, and there will still remain many bees to serve as insulators. A weak colony, on the other hand, has less reserves for insulation, and, since heat is rapidly lost, the bees on the inside must generate excessive heat in order that the outermost bees may always be at a temperature of over 50 degrees F. Since the surface of a spherical cluster is proportionate to the square of the diameter, while the volume is proportionate to the cube of the diameter, it follows that a large colony cluster has a relatively smaller surface for radiation of heat than does a small one. Below about 50 degrees F. individual bees become numb, and so long as the cluster remains active the authors have never found normal bees at a temperature lower than the critical temperature, 57 degrees F. In a small colony the inner temperature is often many degrees warmer than that of a neighboring strong colony, which doubtless explains the prolonged brood-rearing of weak colonies in the fall. Most colonies which die of excessive heat-generation are rushed to their doom by the temperature being high enough to start brood-

rearing, which is perhaps one of the most unfortunate circumstances which a colony can experience in winter. By all means a colony should be so protected that brood-rearing will not be begun until frequent flights are possible.

Since weak colonies so frequently succumb in winter, it is obvious that a too rapid increase in the number of colonies in summer is unwise. Beekeepers have learned that swarming is to be avoided because of the resulting reduction in the honey crop, and the loss in winter is additional argument against allowing the bees to exercise this instinct freely. It is a common saying among beekeepers that a rapid increase is usually followed by a rapid decrease. It is impossible to get too strong a colony for winter, the error always being in the opposite direction.

Effects of accumulation of feces—It was first shown by the authors that heat-generation causes increased consumption of stores; this in turn causes an accumulation of feces within the bees, which is more rapid if the stores contain a high percentage of indigestible materials, and the presence of feces causes increased activity, often resulting in death from excessive heat-generation. Beekeepers call this condition dysentery if the accumulation is so excessive that the bees are unable to retain the feces. Dysentery causes the death of bees in winter, so far as has been seen, solely by undue activity and excessive heat-production. This detrimental effect is reduced by good stores, but obviously the proper method is to prevent an unnecessary accumulation of feces by preventing a heavy consumption of stores, chiefly by providing a sufficiently high surrounding temperature. Honey-dew honey is especially injurious because of the rapidity with which feces accumulate.

In mild climates, in which there are frequent days when bees can fly and rid themselves of feces, the injurious effects of poor stores are less noticeable, because the feces do not accumulate sufficiently to cause abnormal activity. The accumulation of feces is to be considered as an irritant, causing responses similar to disturbance by jarring or exposure to light.

Influence of the queen—In discussions of wintering it is usually stated that to winter well a colony must have a good queen. Obviously a good queen will better prepare a colony for winter by providing a strong colony of young bees than will a poor one, while a colony that is queenless in late summer and fall has little chance of living until spring. A good queen will also increase brood-rearing rapidly in the spring, if a colony has good stores and has been properly protected during the winter. Aside from the important influence on the population of the colony, the queen probably plays no part in wintering.

Spring-dwindling—If the individual bees of a colony are reduced in vitality by excessive heat-production, they may live until spring, but are unable to do the heavy work then needed to bring the colony back to full strength. The adult bees die more rapidly than they are replaced by emerging bees, and the population decreases. This condition, which can be produced experimentally, has long been known among beekeepers as "spring-dwindling." If this condition is observed, the bees may perhaps be slightly relieved of further unnecessary work by packing to conserve heat and by giving abundant stores, but the proper treatment is to prevent the condition by proper care in the preceding fall and winter. The term "spring-dwindling" should not be applied to death of bees from other causes.

Lack of Stores

A common cause of the death of colonies in winter is starvation, which is more certainly due to carelessness on the part of the beekeeper than is unnec-

cessary heat-production. The greater the necessity for heat-production, the more necessary it becomes for every colony to have an abundance of stores of good quality. The amount required varies with the length of the winter, and also with the amount of heat which is generated. It is, of course, necessary also to provide or leave stores enough for brood-rearing in late winter or spring, before sufficient stores come to the hive from natural sources.

COMPARISON OF THE COLONY WITH A FURNACE

Let us assume that we have a furnace for heating a building so constructed that ashes may be removed only when the temperature of the outer air is warm. If the house has thin walls and many openings, the furnace can not maintain a high temperature in extreme cold weather, the amount of fuel consumed is increased, the ashes accumulate rapidly and clog the furnace, and in a desperate effort to raise the house temperature we should probably burn out the furnace. On the other hand, if the house is well built and heavily insulated, a low fire will suffice, and as a result there will be a minimum amount of ashes. The better the fuel, the less the amount of ashes in either case.

It is permissible to compare a colony of bees as a unit of heat-production with this furnace. If the bees are in a single-walled hive in a cold climate, the colony must generate a great amount of heat, must consume much more honey, and feces will accumulate rapidly. As the bees are unable to discharge their feces until the temperature of the outer air is high enough for flight, the "furnace" is clogged. The bees are "burned out" by the excessive heat-production, and, even worse than in the case of the furnace, the irritation resulting from the presence of feces causes still more heat-production. On the other hand, if abundantly insulated, the heat generated is conserved, the consumption of stores and amount of feces are reduced, and the bees can readily retain the feces until a flight day, in any place in which bees can be kept. The better the stores the less the amount of feces in either case.

We should not expect much of a furnace in an open shed, and we have no more right to expect good results from a colony wintered in a thin-walled hive in a cold climate, or even in a better hive placed in a windy location.

CONSERVATION OF HEAT AND REDUCTION OF EXPENDITURE OF ENERGY

In outside wintering the heat produced by the bees is conserved by the insulation of the cluster itself and also by the insulation of the hive and packing. In the cellar there is less insulation near the cluster, but the cellar itself replaces the packing, and is in reality simply an insulation. The insulation of the individual hive, of several hives packed together, or of bees in a cellar serves solely to reduce the loss of heat generated by the bees.

The amount of packing that should be used obviously varies with the climate and it is impossible to make definite general statements in a bulletin intended for all parts of the United States. There is one general statement which can be made with safety. The majority of beekeepers do not give sufficient insulation and no beekeeper ever gave a colony too much. For example, in the relatively mild climate of Washington, most beekeepers winter their bees in single-walled hives. The authors have used a large packing case holding four hives, two facing east and two west, close together. This case was constructed so as to hold 3 inches of packing below, 5 inches on the ends, 6 inches on the sides, and 8 to 12 inches on top. Colonies wintered in such a case in Philadelphia in 1913-14, and in the apiary of the Bureau of Entomology at Drummond, Md., near Washington, in 1914-15,

were in much better condition than colonies left unprotected, and cases of this general type are being constructed for the entire apiary at Drummond, except for such colonies as are used in other wintering experiments. The dimensions here stated should by no means be accepted as best for other localities, especially those farther north, where the protection should be heavier, but in this particular packing case the temperature of the air within the hive but outside the cluster usually stood at about 55 degrees to 57 degrees F., except for a reduction in temperature under one condition to be discussed on the next page. The aim of the beekeeper should be to keep the air about the bees at about 57 degrees F., at which temperature there is no condensation of moisture within the hive, even on the inside of the cover, where it first appears. It might be inferred that if double the amount of packing had been used the temperature of the air about the bees would have been too high. This is not the case, for bees cease heat-generation when the temperature reaches 57 degrees F., (or even sooner when the surrounding temperature is rising¹), and the temperature will not exceed 57 degrees F. unless that of the outer air remains higher than that for a considerable period.

Bees well protected and with good stores do not fly from the hive because of the warmth within when the outer air is too cold for them to do so safely. If bees fly at low temperatures (45 degrees to 50 degrees F.), it is an indication that they need a flight because of an accumulation of feces from poor wintering and does not at all indicate too high an inside temperature because of too much packing. In conclusion, the beekeeper can not apply too much insulating material to a hive.

It has been found that even with abundant insulation, the temperature within the hive and outside the cluster is greatly reduced if the packing case is exposed to wind. During the winter 1914-15 a record was kept of wind velocity directly over a heavily packed case (with entrance $\frac{3}{8}$ inch by 8 inches), and it was found that a wind with a velocity of 20 miles per hour directly on the case reduces the temperature within the hives practically to that observed in an unprotected hive. The beneficial effects of the insulation were therefore nullified and the proper temperature within the hive was not regained for several days unless the outer temperature rose considerably. Beekeepers have long emphasized the importance of protection from wind, but the results observed were much more pronounced than was anticipated or than has ever been suspected by practical beekeepers. The ideal toward which the beekeeper should work is to keep his colonies during cold weather absolutely protected from wind, for here again the protection can not be too great. It is entirely erroneous to assume, as some have done, that such protection is not essential in well-packed hives.

There are several types of hives on the market in which the insulation is built in, to be retained throughout the year. There is no objection to the packing in the summer, except that such hives are not convenient for moving and in some other manipulations. Insulation in commercial double-walled hives is by means of air spaces or insulation, such as sawdust, chaff, broken cork, or shavings. These hives are better for outside wintering than single-walled hives in any part of the United States, but they do not provide adequate insulation at temperatures below about 40 degrees F. Such hives must, of course, be protected from wind, or they are for the time being no better than

1 See Department Bulletin No. 93

single-walled hives.

Types of insulation—Various materials are used for insulation. Besides those named above, paper, dry leaves, and many other substances are in use. Most of the common insulating materials depend on small confined dead-air spaces for their insulating value, and, in general, the more finely divided the air spaces the more efficient the material. Sawdust is usually condemned, because if moisture escapes from the hive into the packing it is retained and the insulating value is reduced. However, if a colony is sufficiently packed, moisture does not condense, except possibly at extremely low external temperatures, and this objection to sawdust is removed. From observations so far made it appears that the beekeeper may use the materials most easily obtained. If dry leaves are used, they should be packed tight, but sawdust should simply be poured in place without being packed tight.

The entrance—The weak place in hive insulation is the entrance. An opening 8 inches wide and $\frac{3}{8}$ inch high is abundant, it usually being constructed as a tunnel through the packing. In cold weather this might be still further reduced. The opening should be shielded from the wind, to prevent a rapid loss of heat, for if the wind blows against the entrance the heat stored up in the packing is lost both to the outside and the inside. The only reason for an entrance as large as the size mentioned above is the danger that dead bees will drop from the combs and block a smaller entrance. Since the number of dead bees is greatly reduced in well-insulated hives this is less important, and furthermore, if the air within the hive is warmed to 57 degrees F. the dead bees will be pushed outside, even in freezing weather.

Methods of packing—The exact method of packing is not especially important, provided enough insulation is given on all sides. Colonies may be packed singly in any sort of box, or they may be packed in groups of four, as previously described (p. 414). Some beekeepers arrange colonies in long rows and apply insulation to the whole row. The placing of several hives in contact has the advantage that the colonies insulate one another. If arranged in groups of four, two facing east and two west, they may be left on the same stand throughout the year and are readily manipulated during summer. If in long rows close together, summer manipulations are impeded, unless the hives are moved after the insulation is removed. Placing colonies in long rows is therefore not advisable. Whatever type of outer case is used, it should be tight, to prevent rain and snow from wetting the insulating material.

A rather common practice is to pack the hive at the sides, top, and rear, but to leave the front unprotected and faced to the south, the object being to utilize the heat of the sun to warm up the interior of the hive and reduce the work of the bees. Any place through which external heat may readily reach the interior of the hive is also efficient as an avenue through which heat may be lost when the sun is not shining. Since the sun shines less than half the time in winter, making no allowance for cloudy days, the weakness of the argument for this practice is obvious. A similar practice is to paint the packing cases a dark color to absorb the sun's heat. Considerably more detailed work is needed to determine to what extent this source of heat is of value to the colony.

Time for packing—At the time of the first killing frost the beekeeper should promptly remove supers, if any are on his hives. If the bees are not adequately supplied with good stores for winter these should now be given immediately, and, when the feeding is finished, the winter insulation should be applied at once. At this time bees are the quietest of any period of the

year. The disturbance incident to putting on the insulation does not do them any harm. After this the beekeeper should have no occasion to open the hive until spring. An outer temperature above 60 degrees F. is desirable at the time of packing, especially if no brood is present. Any day when bees are flying is suitable.

If packing is delayed until late it may do far more damage than to leave the bees unpacked. A colony of bees that is generating heat in response to low temperature is considerably disturbed by the manipulations during packing and the temperature of the inside of the cluster is promptly raised. Frequently, if bees are packed too late (when it is too cold outside), the cluster temperature is raised to brood-rearing temperature, the queen begins to lay eggs, and brood-rearing is usually then continued through the winter, unless it results in the death of the colony, as is often the case. Many beekeepers pack their colonies in December with most harmful results. There is probably no place in the United States where packing is needed in which it is safe to wait later than Thanksgiving Day. Since more beekeepers make mistakes here than in any other phase of outside wintering, this should be emphasized most strongly. The authors have succeeded on several occasions in starting brood-rearing in December by manipulations, both in colonies wintered outside and in removing bees to a cellar, and it is certain that such winter brood-rearing is highly injurious to the colony.

Time for unpacking—If a colony has a good queen and plenty of stores and is well packed, the beekeeper rarely has any reason for opening the hive until spring is well advanced. If he is not sure of the condition of the colony, he may wish to examine it earlier, but this first examination should be brief and the packing may be partially removed and replaced afterwards. If there are any queenless colonies or any colonies short of stores, these defects should, of course, be promptly corrected, after which the colony should remain undisturbed until, as the season advances, frequent manipulations are necessary. It is often best to leave the insulation on until the colonies need more room, which will probably be as late as May 15 in the North. Colonies which have wintered poorly need their insulation longest, while colonies that have been well insulated, either in a cellar or outside, can, if necessary, stand considerable exposure without much damage, although the work of heat-generation thereby reduces the energy available for building up the colony rapidly.

The time for removing packing may be still further delayed by wintering a colony outside in two-hive bodies, the upper one being well supplied with honey. Since there is more space to keep warm, such a hive should be more thoroughly insulated. If this plan is followed, the beekeeper is sure that sufficient stores are available and he can probably locate any queenless colonies by a brief external examination. Since wintering in two-hive bodies has not been practiced extensively, it should be tried with caution, but reports of this method should be available from all parts of the country and beekeepers are urged to try it on an experimental scale. The plan has much to commend it.

Providing a windbreak—It is well established that a windbreak of evergreens is superior to a solid windbreak such as a house or solid fence. The beekeeper can readily determine whether his bees are located in a place where the wind rarely or never blows more than 5 miles an hour in winter. If the apiary is not so located, it should be moved during the summer to a place in the woods, in a gully, or in some other sheltered place. Bees should never be moved in winter. If it is not practicable to move the apiary, a high fence

perhaps 8 feet high, should be constructed on the exposed sides. The more compact the apiary, the easier it is to construct a windbreak, which is an argument for placing colonies in groups of four. Evergreens are slow growing and a high fence may be used until the permanent windbreak is sufficient. If the apiary is practically surrounded by buildings, this may be adequate protection, but such a location is usually not the most convenient for the apiary. A southern exposure is usually recommended as best for winter, for it is claimed that the heat of the sun is beneficial. Since the sun shines only a small fraction of the time in winter in most localities, especially in the East, where there is much cloudy weather, this feature should not be unduly emphasized.

PROVIDING ADEQUATE WINTER STORES

The amount of honey that a colony will need from the time it is packed until it is unpacked can not be closely estimated. The aim of the beekeeper in winter should be to save bees rather than honey, and he can make no more profitable investment than to give his bees more than they can possibly use. Some beekeepers claim that it is best to have the old bees die soon, so as to save stores. The actual consumption in such badly wintered apiaries is probably not at all decreased.

If the bees do not have sufficient stores, they may be given combs of honey, but these should always be given before cold weather, so that a proper clustering space may be formed by the moving of honey, since bees always cluster in empty cells of the comb adjacent to stores.

If honey in combs is not available, the bees may be fed extracted honey, but the usual practice is to feed a thick sugar syrup made of 2 or 2½ parts of sugar to 1 part of water by volume. To this syrup 1 ounce of tartaric acid should be added for each 40 to 60 pounds of sugar while the syrup is being heated to a boiling point to dissolve the sugar crystals. The syrup should be boiled 15 minutes. The acid helps to invert the cane sugar, thus retarding its granulation in the combs. If there is any question as to the quality of the stores, it is a good practice to feed about 10 pounds of syrup at the time of packing, in addition to the stores provided earlier, this being stored immediately above the cluster. It is thus used first, and an accumulation of feces does not occur so long as the bees use only the sugar syrup. There is, however, no better food in winter than a good quality of honey. As was stated earlier, honey-dew honey causes a rapid accumulation of feces, resulting in dysentery. If this is present in the fall, it should be removed and better stores given. Some fall honeys are similarly injurious, but their injurious effects may be reduced by feeding syrup at the time of packing.

SUMMARY AND CONCLUSIONS

Bees need protection from cold and wind in winter in practically all parts of the United States. The beekeeper should give abundant insulation, since it is impossible to give too much and since most beekeepers give too little. Great care should be exercised to protect colonies from wind. Every colony should be strong in the fall, so that heat may be generated and conserved economically. To reach the proper population a good queen is necessary.

Many colonies die of starvation in winter. This can easily be avoided.

The beekeeper can make no better investment than to give his colonies proper care for winter.

If the excessive winter losses are prevented, commercial beekeeping will be greatly benefited. Such a condition is entirely possible when beekeepers come to understand the fundamental principle of wintering.

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WISCONSIN—Gus. Dittmer....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

If you are a paid-in-advance member of one of the above associations, you are a member of the National Beekeepers' Association in good standing until the end of this fiscal year without additional expense. If you are NOT a member of one of the above associations, you should be. Send \$2.00 to Secretary Wesley Foster, Boulder, Colorado, which will pay for the Beekeepers' Review and your National and local dues for a year. Do it today, waiting is dangerous! If more convenient, the order can come to this office.

National Secretary Wesley Foster writes that we may expect something definite regarding the next National meeting in time for the December Review. The program will not likely be ready for the press before January, but he hopes that the date and place of meeting will be decided upon in time for the December number of the Review.

Several places have been mentioned as desirable to hold the 1916 National convention, among those especially favored being Washington, Philadelphia and Buffalo. Washington seems to be the favorite thus far, although something may turn up later to change this sentiment. San Francisco has sent several invitations for the National to meet there next year, but the East is clamoring for the next meeting and it now looks as if it would go that way next time.

Two of Europe's Most Noted Apiarists

C. P. DADANT, Hamilton, Illinois

Given at the National Convention, Denver, Colorado, February, 1915

Since I have lately made a protracted visit to Europe, I have been expected at Beekeepers' conventions, to bring information concerning European bee-culture. But our President has slightly changed my program this time, by asking me to speak of some of the most capable beekeepers of modern Europe. The subjects I have chosen are Thomas Wm. Cowan, of England and Edward Bertrand, of Switzerland.

Mr. Cowan is one of the best known bee students, and perhaps the best posted in the entire world. For forty years chairman of the British Beekeepers' Association, editor of the *British Bee Journal* which has now entered the forty-second year of its existence and is the only weekly bee magazine published at present, Mr. Cowan is a man of most extraordinary attainments.

He is now seventy-seven years old. He and his wife celebrated their golden wedding May 19th, 1914. His home is at Taunton, England. But he spent a number of years with his wife and his son in California and at different times spent the summer in Switzerland. He has been very fond of travel. When a discussion arose concerning the so-called "Punic bees" of Tunis, claimed to be an entirely different race from the common "*apis mellifica*" and called by some "*apis nigra*," he made a trip to Africa and ascertained that the bees of Tunis and Algeria differed little if any from the above mentioned race.

Mr. Cowan is the author of several important works on bees. The *British Beekeepers' Guide Book*, of which some 80,000 copies have been issued, describes the modern methods and recommends the use of a movable-frame hive very similar to the Langstroth. Mr. Cowan recognizes the great superiority of the Langstroth hanging frame system over all other systems.

His most scientific work, however, is entitled "*The Honeybee*" and is a thoroughly descriptive work on the anatomy of the bee, its natural history, microscopical studies, parthenogenesis, comb construction, etc.

Another exhaustive work of Mr. Cowan is entitled "*Wax Craft*." It gives a historical study of the past and present uses of beeswax, its chemical composition, adulteration, tests, production by the bees, rendering of combs, purifying and bleaching.

On bee diseases, Mr. Cowan is an authority. In fact, in all microscopic studies, he has given proof of deep knowledge. The microscope which he uses and which magnifies a thousand fold was made by himself, for he is a fine mechanic. This instrument, which I had the opportunity of seeing, when he visited us, during his first trip to America, in 1887, is one of the best in existence. Examining the skeleton of a bee with this instrument, was very much like walking over the skeleton of an immense whale, for with the help of two set-screws the object under the lense can be moved back and forth and from right to left, gradually and with the greatest ease. Under this same microscope, minute pollen grains looked like a pile of orange oranges of large size, having the same rough appearance.

Mr. Cowan's works have had the honor of translations into eight different languages. He is a linguist himself. On this point I will take the liberty of reproducing part of a letter written by Dr. C. C. Miller to E. R. Root in 1898, after a visit of Mr. and Mrs. Cowan at the Miller home:

"Mr. Cowan impresses me as a man with a wonderful fund of information, but who has hardly discovered yet that he is any better off in that respect than the ordinary mortal. It so happened that while he was here, I received a letter and a newspaper clipping in a foreign language. I didn't even know what was the language—thought by the looks of the printed page that it might possibly be modern Greek. But Mr. Cowan read it off at sight. It was Russian. It made me feel I'd like to begin life over again and be a linguist."

In 1910, at the end of thirty-six years of chairmanship of the British Association, Mr. Cowan made an attempt to retire. As reported in the American Bee Journal that summer, "this was felt to be nothing short of a calamity, and instead of accepting his resignation, the Association begged that he would take further time for consideration," with the result that he continued still to fill the position.

In addition to being a beekeeper of experience, a linguist and a microscopist, Mr. Cowan is a botanist of great experience. While visiting with him at the Bertrand home in Nyon, where are gathered numerous specimens of exotic plants, shrubs and trees, brought into the little park adjoining the villa by Mr. Bertrand, both the owner and myself were struck with the wonderful ease with which Mr. Cowan could give the scientific name of every plant he saw, also knowing whence it originated. Botany is needed in bee culture,

yet very few of us are versed in its study. I feel justified in saying that Mr. Cowan is probably the best informed scientific apiarist in existence at the present day.

Edward Bertrand

Mr. Bertrand was born in Geneva, Switzerland, in 1832. He is therefore nearly eighty-three years of age. After having received a thorough education in his native city, he went to England at the age of twenty, where he spent three years, becoming thoroughly acquainted with the English language. He finally accepted a position with a Paris broker and remained in that occupation until after the Franco-Prussian war of 1870. The worry of the siege and of the Commune upheaval which followed, through a portion of which he was charged with the great responsibility of guarding large funds left in his care, gave him a nervous tension which affected his health and from which he never fully recovered. It was then that he decided to withdraw from active business, retire to his home country, in a pretty villa or chalet which he purchased on the shore of Lake Geneva, in full view of Mont Blanc, and where he cultivates trees, flowers and bees. He was induced to try bees through the gift from one of his friends of two colonies in straw skeps.

His beginning in apiculture was a failure. The location on the lake shore was not very favorable, since the bees had only half the scope of pasture which would be secured farther from the water. He tried the local inventions of movable-frame hives, with small frames, then the Berlepsch or German method.

After many drawbacks, he finally purchased the works of De-Layens and of the elder Dadant, tried their systems, and in 1877 his success began. He installed two outapiaries in the mountains of the Canton of Vaud, and another in 1880 in the Jura mountains.

With the help of one of his pupils, for he was teaching apiculture gratis, he established this last mentioned apiary, and finally obtained large crops. A hive on scales at this apiary once showed an increase of 11 kilograms (24.2 pounds), in 24 hours. In 1876 he has been elected secretary of the Societe Romande of Apiculture. He was its president at different dates. But as this association, by the terms of its constitution could not retain the same president more than two successive years, he became its treasurer and librarian and remained in this office until 1903.

In 1879, he established, at his own expense, a monthly Bulletin intended as the organ of the above-named association. But this

publication became so popular in all French-speaking countries, so cosmopolitan in its make-up, that within three years its title was changed to that of "Revue Internationale D'Apiculture," which continued until 1903, with the help of Mr. Bertrand's wife and of a noted French apiarist, Crepieux-Jamin. According to Thos. Wm. Cowan, this was "without doubt the most practical and best French bee-journal on modern bee-culture."

The works published by Mr. Bertrand, at different times, for the use of beginners, form quite an extensive apiarian library. I will mention some of them: "Routine and Modern Methods," "Description of the Best Hives," "Advice and Notes for Beginners," "Beekeepers' Calendar," etc. The material contained in these small works was later condensed into a larger work entitled "Conduite du Rucher" (Management of the Apiary). The latter work, after seven translations and many editions, is still considered the standard bee book in Switzerland and many other countries.

In 1886, Mr. Bertrand translated the work of Cowan, "The British Beekeepers' Guide Book;" later in 1890 the Italian work of Rauschenfels, "The Bee Moth." In 1891, he took very active part in the publication of the Dadant-Langstroth book, "The Hive and Honeybee" in French. Two editions of this were published in Geneva, under his supervision. He also published a pamphlet describing the "Dadant-Blatt hive." In 1897, the "Unedited Letters of Francois Huber" were gathered and published by him, for we must not forget that he lives in the very country where this famous writer made and published his interesting studies of the honeybee. Vevay, the home of Huber, is only about thirty miles from Nyon, on the shore of the same lake. These unedited letters have never yet been translated into English and I have often wondered whether a translation of them would be welcome to our American readers.

In 1901, after having fought and destroyed foulbrood in his apiaries by the constant and careful use of drugs, he published a work on this disease and its treatment, then translated the book of F. C. Harrison, Canadian bacteriologist, upon the same subject. He has also translated the "Honeybee" and "Wax Craft" of Cowan, into French.

The biography of Mr. Bertrand would be incomplete, if I should fail to give more definite detail of the work of his wife, whom I have already mentioned in connection with the publication of the "Revue Internationale." Mrs. Bertrand, born also in Switzerland, in 1843, and therefore eleven years younger than her husband,

was educated in Paris and it was there that they became acquainted and were married in 1866. She is as devoted to bee-culture as her husband and worked with him in the publishing of both his magazines and his books. Versed, like him, in several languages, she translated numerous articles from the English, American and Italian press, and assisted her husband in every part of his labors.

Willing workers, Mr. and Mrs. Bertrand gave their time freely to apiarian teachings. He gave lectures and demonstrations in both Nyon and Zug, free, for three years, from 1884 to 1887. Pupils were sent to him by the French Ministry of Agriculture, for better acquaintance with the new methods. He also taught apiculture at the Agricultural Institute of Lausanne and at the Horticultural School of Geneva.

Ill health compelled Mr. Bertrand, in 1903, to abandon his magazine and his apiarian teachings. But both he and his wife are still affable and kind to the friends they have made in bee-culture. We tested this at our visit in Switzerland in 1913. During that visit, a Paris bacteriologist of the Pasteur Institute, Mr. Melikoff, called at the Bertrand home for information concerning foul-brood. This gentleman, a Russian by birth, knew Mr. Bertrand only by the reputation that he had gained through active and earnest labor. But he expressed the consensus of the World's opinion concerning our friend, in a short but well deserved compliment, when he called him "the most celebrated authority on bees in the entire world."

January, 1915.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. **EASTERN LABEL COMPANY**, formerly Pearl Card Co., Clintonville, Conn.

WANTED—Comb extracted honey and beeswax. **R. A. BURNETT & CO.**, 173 So. Water St., Chicago.

FOR SALE—Fine quality Raspberry-Milkweed honey in new 60 lb cans (2 in case). Write for sample and price. **P. W. SOWIN-SKI**, Bellaire, Mich. tf

FOR SALE—Finest quality white extracted honey in nice 60 lb cans, 2 in a case at 6½ cents per pound. **F. O. B. COCHRANE**, Ala., **JOE C. WEAVER**.

5,000 lbs. Buckwheat-Goldenrod blend extracted honey for sale. Two 5 gal. cans to the case—120 lbs. net., \$8.00 (6 2-3c per pound). Can ship at once. **IRA D. BARTLETT**, East Jordan, Michigan.

FOR SALE—White extracted honey 7c, light amber 6c, two 60 pound cans to case, 12 five pound pails in a case, for \$6. or a case of six ten pound pails for \$6. Honey in pails is light amber and all honey is well ripened and mild flavor. **H. G. QUIRIN**, Bellevue, O.

FOR SALE—15,000 lbs. extra quality white clover extracted honey in new 60 pound tin cans, two in a case for shipment. This honey was left upon the hives until after the close of the season before extracting, consequently, is of superior quality. A sample will convince you. Address, **J. N. HARRIS**, St. Louis, Michigan.

FOR SALE—Ten cases of two 60 lb net cans of beautiful white clover extracted honey, at 10c per pound. New cans and cases. Sample free. Address RAY C. AUSTIN, Ashley, M'ch.

FOR SALE—Fancy sweet clover extracted honey in cases of 120 lb net at 7c per pound. In cases of 12-5 lb friction top buckets (pails) @ only \$5.00 per case. 60 lb net. Send cash. VIRGIL WEAVER, Falmouth, Ky. tf

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address JNO. F. SHAW, Atascosa, Texas.

FOR SALE—Water white Alfalfa, White Clover, Amber Alfalfa and Amber Fall honey in 60 pound cans or smaller packages. Amber Fall honey is of our own extracting and can also be furnished in barrels. Write for sample of kind desired and state quantity you can use. DADANT & SONS, Hamilton, Illinois. tf

FOR SALE—Twenty-two cases, two 60lb net cans to the case, of amber extracted honey at only 5½c per pound on car in Pa. This is a shipment of Texas amber honey, rather better for baking purposes than table use, still some may be able to use it for the latter. The Review has taken over this bunch of honey in settling up an account for one of our subscribers. We can furnish a small sample from this office to intending purchasers. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Choice White Clover Extracted Honey for Sale

Left upon the hives until thoroughly cured by the bees; put up in new 60 pound tin cans, one and two in a case for shipment. This thoroughly-cured-upon-the-hive honey is a little higher in price than the ordinary, something in comparison with creamery and the ordinary store butter. I quote a price of \$6.00 for a single can, or 9 cents per pound in lots less than ten cases, two cans to the case. For ten cases or more the price will be 8½ cents per pound. Above prices are free on board the cars here. Sample free. Address, D. R. TOWNSEND, Northstar, Mich.

CHICAGO—Arrivals of honey are quite free, and stocks are accumulating in the absence of a free outlet.

Prices on the best grades of white comb-honey are ranging from 16 cents to 17 cents per pound, with amber grades at 13 cents to 14 cents per pound. Mixed colors are difficult to class at anywhere from 10 cents to 12 cents per pound. Extracted honey is dull with prices ranging from 7 cents to 9 cents per pound. Ambers from 5 cents to 6 cents per pound.

Beeswax at 28 cents to 30 cents per pound.
R. A. Burnett and Co.,
173 W. South Water Street,

BEEES AND QUEENS

FOR SALE—75 colonies of bees in 8-frame standard hives. Hives nearly new. Cheap only in price. Must sell at once on account of poor health. BEN METZLER, Rt. 1, Jeromesville, Ohio.

FOR SALE—40 colonies bees; mostly carniolans; 10 frame hives; heavy with stores. N. S. Burner, Sellman, Maryland.

IT WILL be to your interest to write us at once for our prices on three band queens, nuclei and bees by the pound. Can supply a few more. R. V. & M. C. STEARNS, Brady, Texas.

FOR SALE CHEAP—In good location 32¾ acre farm, nice house, good barn, stable, sheds, workshop, 50 stands of bees, extra hives, etc. For full information address J. A. JANSSEN, R. F. D. 4, Charlevoix, Mich.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. EASTERN LABEL CO., (Formerly Pearl Card Co.), Clintonville, Ct.

FOR SALE—A good Bee location. For information address GEORGE PARKS, Errington, P. O., B. C., Canada.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

WANTED—A position with Southern beekeeper. Florida preferred. Five months or less, experienced, reasonable, reference, etc. EDWARD HASSINGER, JR., R. 16, Box 6, Greenville, Wis.

FOR SALE—A 50 acre farm, new house, good barn and out buildings, on pike road. Also 100 stands bees with all fixtures for running. Price reasonable. Address HARRY E. KEEL, R. D. 2, Madison, Ind.

HONEY LABELS of the better sort. Lowest prices.. Honey advertisers that sell your honey. Printing for Beekeepers. Catalogue free. LIBERTY PUBLISHING COMPANY, Sta. D, Box 47, Cleveland, Ohio.

4000 gummed labels 1¼x2¼ printed in two colors, \$1.00. Eat Honey labels 1000 for 30c, 5000 for \$1.00. Estimates free on all class of work. LABEL SHOP, 186 Meadow Street, New Haven, Connecticut.

HONEY JARS FOR SALE—About twenty gross, square glass honey jars, glass top and spring fastener, from one-half to two pounds. In original packages at less than factory prices. Have quit the bottling business. W. H. SETTLE, Gridley, Ill.

WANTED—Healthy young man, farm reared preferred, to work with bees. Experience not necessary. Intelligence, honesty and sobriety imperative. Married or single. Excellent permanent opportunity for right man. D. W. MILLAR, Holguin, Cuba.

WANTED—Back numbers of "Beekeepers' Review" as follows:—1906 January and August; 1907, January, March, April, May, June, July, August and December; 1908, March; 1910, November; 1914, March and April; 1915, March and July. Will pay 15c per numbers on delivery. M. C. RICHTER, Belleta, California.

We have made arrangements whereby we can club the *Reliable Poultry Journal* and the *Beekeepers' Review*, both for a year at only \$1.15. The *Reliable Poultry Journal* charges 25c additional to Canadian subscribers for postage.

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using Eureka Paste. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Six Pound Glass Jars for Honey

This half gallon Flint glass container has a screw cap about the same size as a mason jar. This jar has a special lacquered screw cap, about as good as could be devised for honey, and we can furnish them four dozen in a case at 7½c each, or \$3.60 per crate, f. o. b. Washington, Pa. Address THE BEEKEEPERS' REVIEW, Northstar, Michigan.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the U. S. MAILING CASE CO., Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

BOOKS ON PRACTICAL BEE CULTURE

Mailed Post Paid Upon Receipt of Price	
A B C and X Y Z of Bee Culture, cloth	\$2.00
A B C and X Y Z of Bee Culture half leather	2.75
A B C and X Y Z of Bee Culture, German	2.50
A B C de L'Apiculture, French ed.	2.00
El A B C and X Y Z de la Apicultura, Spanish	2.50
Beekeeping—Phillips	2.00
Langstroth on the Hive and Honeybee Reprint	1.00
Advanced Bee Culture, W. Z. Hutchinson	1.00
Biggle Bee Book	.50
British Beekeepers' Guidebook, Cowan	1.00
Cook's Manual of the Apiary	1.15
Doolittle's Queen-rearing	1.00
Fifty Years Among the Bees, C. C. Miller	1.00
First Lessons in Beekeeping	.50
Honey Bee, The—Cowan	1.00
How to Keep Bees—Mrs. Comstock	1.00
Humble Bee, The—F. W. L. Sladen	3.25
Irish Bee Guide, Rev. J. G. Digges	1.00
Langstroth, Rev. by Dadant, cloth	1.25
Modern Bee Farm, S. Simmons	2.00
Quimby's New Beekeeping	1.00
Wax Craft	1.00
Increase; Forcing the Queen to Lay; each French edition, separate	.50
POPULAR BOOKS ON BEE CULTURE	
Bee People, The, Margaret M. Morley	\$1.50
Children's Story of the Bee	2.00
Honey Makers, The, Margaret M. Morley	1.50
Life of the Bee, Maeterlinck	1.40
Bee Master of Warrilow, The—Edwards	.57
Lore of the Honey Bee	2.00
Queenie	.75
Bee Models	each 50c; 2 for .75

Address All Orders
THE BEEKEEPERS' REVIEW
Northstar, Michigan

Bee Meetings Next Fall

Some time ago a committee was appointed to arrange the dates of next winter's conventions on the circuit plan as far as possible. Several months have been required to arrange the dates to the satisfaction of all concerned. The States joining in the circuit and the dates on which convention will be held are as follows:

1. Ohio Nov. 26-27.
2. Illinois Nov. 29-30
3. Kansas Dec. 1-2.
4. Missouri Dec. 3-4.
5. Minnesota Dec. 7-8.
6. Wisconsin Dec. 9-10
7. Indiana Dec. 10-11.
8. Iowa Dec. 13, 14, 15
9. Michigan Dec. 15-16.
10. Chicago-Northwestern Dec. 17-18.

From the above dates it will be seen that conventions will be in session continuously excepting Sundays. By this plan, speakers of prominence will be able to attend a number of conventions without inconvenience. If the dates could have been conveniently arranged, less travel would have been necessary by having adjoining States follow each other. Some dates were fixed and the other meetings had to be adjusted to them. It is to be hoped that the circuit plan will prove so popular that somewhat more convenient arrangements may be possible another year. The location of the various State conventions will be announced by their respective secretaries. Some locations have apparently not yet been selected.

FRANK C. PELLETT.

Ithaca, N. Y., September 30, 1915

Beekeepers' Review,
Northstar, Mich.

Sirs:—Please announce in the Review that the Ohio Beekeepers' Association will hold its annual convention at Akron, Ohio, November 26 and 27th, 1915. Besides the regular program on which some of the noted bee men of the country will serve, there will be visits arranged for the Quaker Oats Factory, Rubber Factories and the C. C. Barber farm.

We expect this to be one of our best meetings.

E. R. KING, Secretary.

(Secretary King's present address is Department of Entomology, Cornell University, Ithaca, N. Y.—Ed.)

Ontario Beekeepers' Association Convention 1915

The Annual Convention of the Ontario Beekeepers' Association, will be held in the York County Council Chambers, 75 Adelaide St., East Toronto, on Tuesday, Wednesday and Thursday, Nov. 23rd, 24th and 25th.

The Executive have drafted a very attractive program that is sure to prove interesting and instructive.

The principal outside speaker will be Dr. E. F. Phillips, in charge of Bee-culture Investigations, U. S. Dept. of Agriculture, Washington, D. C. Dr. Phillips has been investigating wintering conditions of the colony, and at the opening session, Tuesday afternoon will speak on "Temperature and Humidity in the Hive in Winter." In the evening he will give an Illustrated Lecture, "Some Beekeepers of the United States." Being an extensive traveler and a keen observer, he is sure to have a valuable store of information for this occasion.

On Wednesday morning, Mr. H. G. Sibbald, a large honey producer of Ontario, will deal with "Outdoor Wintering," and Mr. Morley Pettit, Provincial Apiarist, will give a summary of the year's work.

The varying seasons of the past three years have introduced new features into bee management. Swarm Control and Summer Protection have been practiced by Mr. F. W. Krouse, and he will relate his experiences. For the beginner, as well as the experienced beekeeper a discussion on honey production, both comb and extracted, will be interesting.

An exhibit of apiary appliances will be a special feature of the Convention. These handy tools and jigs are the inventions of practical beekeepers and greatly assist both for speed and accuracy many of the small operations and manipulations about the apiary. Time will be allotted during the last session on Thursday afternoon for an address on "Modern Apiary Equipment and Buildings," by Mr. Wm. Elliott, Adelaide, Ontario. Mr. L. Caesar of the Department of Entomology, O. A. College, Guelph, will discuss "Poison Sprays and Their Relation to Bees."

Programs will be sent to members of the Association as soon as final arrangements have been completed.

For further details address the Secretary-Treasurer, Morley Pettit, O. A. College, Guelph.

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each has for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Robert E. Foster, Rifle, Colorado, 200 to 500 colonies.

Frank Willmert, Elmore, Minn.

Ben Metzler, R. No. 1, Jeromesville, O.

A. J. Diebold, Seneca, Ills., 25.

October 1st, 1915, Statement of Ownership, Management, Circulation, etc., of the BEEKEEPERS' REVIEW published monthly at Northstar, Michigan, required by the Act of August 24, 1912.

Managing Editor—E. D. Townsend, Northstar, Mich.

Business Manager—E. D. Townsend, Northstar, Mich.

Publisher—The National Beekeepers' Association, Northstar, Mich.

Owners—The National Beekeepers' Association, Northstar, Mich.

Known bondholders, mortgagees, or other securities: The National Beekeepers' Association purchased the Beekeepers' Review on a contract. E. D. Townsend, Northstar, Michigan now holds said contract.

Signed,

E. D. TOWNSEND,

Sworn to and subscribed before me this 1st day of October, 1915.

F. L. COSS, Notary Public.

My commission expires March 17, 1918.

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We get you the Best Market Price for your Produce. Write us for further Particulars.

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Above Sticker No. 20 with your name and address, 50 cts per M. These are very effective. Address as above.

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The above seals, printed with bright red ink and gummed, furnished at 30c. per thousand and postpaid. Advertise Honey, Paste them on your envelopes, packages, honey jars, everywhere. Keep the word "HONEY" before the public, it pays. Send orders to

EASTERN LABEL COMPANY

Formerly Pearl Card Co.,

Clintonville, Connecticut.

Queens of MOORE'S Strain of Italians

PRODUCE WORKERS

That fill the supers quick
With honey nice and thick.

They have won a world-wide reputation for honey gathering, hardiness, gentleness, etc.

Untested queens, \$1.00; six, \$5.00; 12, \$9.00.

Select untested, \$1.25; six, \$6.00; 12, \$11.00.

Safe arrival and satisfaction guaranteed.

Circular free.

I am now filling orders by return mail.

Queen-breeder.

J. P. MOORE,
Route 1, Morgan, Ky.

I Offer for Sale My Home

Situated at 18 Meyer Avenue, Beverly, on the Holland Interurban which is on the City side of Wyoming Park. This home consists of a 9 room house nearly new with full sized basement, good well and cistern inside. A barn 18x18 with cement floor suitable for auto, a poultry house with cement floor for 50 hens and has 2 poultry yards adjoining. The land comprises 4 large lots nearly an acre set with apple, peach, pear, plum and cherry trees in rotation from early to late for fam-

ily use. These fruits were selected by a horticulturist and are the best and are now in bearing. On the 6 foot fence is 40 rods of all the choicest grapes known. Everything is in the best of repair on the place.

My reason for selling is that my business calls me to another city. This is an ideal home 15 minutes ride with auto to center of city. The price is \$3,000, one-fourth or one-half down. If you are looking for a home you should see this or write J. A. PEARCE, R. 1, Grand Rapids.

The Pearce Method of Beekeeping

Adopted at the Michigan State Prison with J. A. Pearce as Manager

You will be pleased to learn that I am in charge of the Michigan State bees at the Jackson Prison. The State farms comprise about 3,000 acres. It is intended to keep a 1000 or more colonies of bees. We have at present 130 colonies in our double 8 frame hives. They will be moved into their permanent houses about October first where they will stand indefinitely winter and summer as the PEARCE METHOD has been adopted by the management. Anyone wishing to know what this method is should send 50 cents to J. A. Pearce, Rural No. 1, Grand Rapids, Mich. for "The Pearce Method of Beekeeping" or \$1.10 to the Beekeepers' Review for the Review one year and the book.

J. A. PEARCE.

Special Prices on 60 lb Honey Cans, 2 in a Case

If you can use 100 cases of 60 lb tin cans, 1 3/4 in. screw, two in a case we have something special both in quality and price to offer. You will miss it, if you buy from other quarters if you are looking for something good in honey cans, at a reduction from regular price. They are shipped from Chicago. Kindly write this office when in need of the very best quality of 60 lb cans, at the lowest price.

The BEEKEEPERS' REVIEW, Northstar, Michigan

How Would This Combination Suit You?

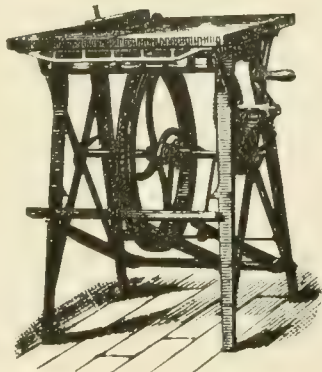
The Beekeepers' Review 15 months beginning with the October Number	\$1.25
The Youth's Companion for 1916, the balance of 1915 free, and The Companion Home Calendar, free.....	2.00
McCall's Magazine, one year.....	.50
One McCall Dress Pattern .....	.15
Regular price for all	\$3.90

All for Only

\$2.45

Address with remittance

THE BEEKEEPERS' REVIEW, Northstar, Michigan



MAKE YOUR OWN HIVES

Beekeepers will save money using our Foot Power

SAWS

in making their hives, sections and boxes. Machine on trial. SEND FOR OUR CATALOGUE

W. F. & JNO. BARNES CO.

84 RUBY STREET

ROCKFORD, ILLINOIS

GOLDEN ITALIAN QUEENS

Mr. Beekeeper, do you want the best queens that money can buy? If so try this strain of Golden Italians that for fifteen years has been a leader. All queens reared from superior Golden mothers and mated with select Golden drones; are large, vigorous and prolific; the bees gentle and hustlers, and are noted throughout the United States as a disease-resisting strain. Mated from strong nuclei, three to five full Langstroth frames. Safe arrival (U. S. and Can.) purity of mating and satisfaction guaranteed. Write for descriptive circular.

PRICES OF QUEENS

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
Untested....	\$1.50	\$ 7.50	\$13.50	\$1.25	\$ 6.50	\$11.50	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Tested.....	2.00	8.50	15.00	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Sel. Tested..	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Untested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	11.00	18.00

Breeders \$5.00 to \$25.00

BEN G. DAVIS, Spring Hill, Tennessee

Review Subscribers Having Honey For Sale

We are herewith submitting a list of subscribers having honey for sale. This list includes those only who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale and the letter "C" following the address indicates they have comb-honey for sale and the letter "E" extracted, both letters indicating the subscriber has both comb and extracted honey for sale. This list is published free to paid-in-advance subscribers to the Review. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SWEET CLOVER

Geo. A. Hummer, Prairie Point, Miss C.
L. T. Rice, Brookville, Ky. E.
J. P. Moore, Morgan, Ky., E.
A. J. Diebold, Seneca, Ills., E.

HORSEMINT

W. C. Collier, Galoid, Texas E.

AMBER

S. E. Miller, Rhineland, Mo., E.
M. W. Harrington, Williamsburg, Iowa E.
J. M. Cutts, R.F.D. No. 1, Montgomery, Ala.E.
J. C. Stocks, 328 Park St., Grinnell, Iowa. E.
Fred Briggs, R. No. 2, New Sharon, Iowa, E.
Peter Schaffhauser, Havelock, N. C., E.
Nelson Overbaugh, Frankfort, Kansas, C. & E.

ALFALFA

M. D. Phillippe, Elgentro, Calif., E.
W. J. Strahmann, Clint, Texas, E.
J. R. Marlow, Rt. 1, Weiser, Idaho, C. & E.
Idaho-Oregon Honey Producers' Ass'n.
P. S. Farrell, Sec., New Plymouth, Idaho, E.

BULK COMB; ALFALFA

W. J. Stahmann, Clint, Texas.

BUCKWHEAT

Harry W. Beaver, Troy, Pa., E.
Ira D. Bartlett, East Jordan, Michigan, E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
N. L. Stevens, Venice Center, N. Y., E.
W. D. Wright, Altamont, N. Y., E.

SPANISH NEEDLE

J. VanWyngharden, R. No. 4, Hebron, Ind., E.

WHITE CLOVER

Frank Murray, Chase, Michigan C & E.
D. R. Townsend, Northstar, Michigan E.
A. H. Fralick, Homer, Mich. E.
E. B. Rosa, Monroe, Wis. E.
E. A. Doney, Dixon, Iowa, E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
C. H. Burrows, Oran, N. Y., E.
G. Dahlen, Marmory, Minn. E.
W. M. Peacock, Mapleton, Iowa, E.
A. S. Tedman, Weston, Michigan, E.
A. S. Crotzer, Spena, Ill., C.
Howard Honey Co., Tyre, Michigan, E.
Irving Pierce, Union City, Michigan, E.
Geo. Dodds, Cambridge, N. Y., E.
O. H. Townsend, Merritt, Michigan, E.
N. L. Stevens, Venice Center, N. Y., E.
E. D. Townsend, Northstar, Michigan, E.
Mrs. J. Hettel, Marine, Ills., E.
John G. Wagner, Elkader, Iowa, E.
David Running, Filion, Michigan, E.
T. S. McLachlin, Whitehall, N. Y., C.
W. D. Wright, Altamont, N. Y., E.
J. C. Stocks, 328 Park St., Grinnell, Iowa. E.
Theo. Gentz, Shawano, Wisconsin. E.
W. S. Pangburn, Center Junction, Iowa-C&E

CLOVER AND BASSWOOD BLEND

Oscar Kazmeier, Kiel, Wisconsin.
Irving Pierce, Union City, Michigan, E.
N. L. Stevens, Venice Center, N. Y., E.
F. W. Lesser, Rt. 3, East Syracuse, N. Y. E.
F. E. Matzke, Juda, Wisconsin. E.
W. D. Wright, Altamont, N. Y., E.
Harry W. Beaver, Troy, Pa., E.

Parcel Post Mailing Cases and Cans for Mailing Honey

They are square syrup cans with 1¾ in. screw caps, except the quart which has a 1¾ in. cap. The mailing cases are of heavy corrugated paper, built double, and fulfill all the requirements of the postal regulations. Our case requires no glue or pasting, just telescope the case together after putting in the can of honey, wrap with a heavy cord and it is ready for mailing. Out of thousands in use, not a single complaint of breakage in the mails has been reported. Our case is being used by the U. S. Government, they just now placing their third order. Notice that the price is now some less than formerly.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
½ gallon can, including mailing case, per crate of 100.....	8.00
¼ gallon can, including mailing case, per crate of 100.....	6.00

We cannot furnish less than a full crate of the above at any price.

Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

Gallon and Half-Gallon Glass Containers for Honey

Of all the containers for honey we have seen, this gallon jug with bail is best. Fill it with rich, ripe, roapy, delicious white honey, and watch your prospective customer's "mouth water" as he beholds the most gracious sweet ever "tickled the palate" of mortal man glistening in its purity, for can't he see it (!) The glass is of pure white flint, consequently, does not obstruct the vision and it is a vision, too, to the would-be customer. But you must see it when filled with honey to appreciate its attractiveness. We have made arrangements to furnish these flint glass jugs with bails f. o. b. Alton, Ill. as follows:

3 Dozen 1 gallon, per crate.....	\$4.75
6 Dozen ½ gallons, per crate.....	7.00
½ Dozen 1 gallons in reshipping case, per case.....	.80
1 Dozen ½ gallons in reshipping case, per case.....	1.00

The two quotations above are for containers each packed singly in double corrugate paper, so single jugs when filled with honey can be shipped singly without other packing. The last two quotations are for retail trade at home, or where a shipment is made of a half dozen or dozen, according to the size of the jugs ordered. They are wide mouth and have American metal screw caps.

Address all orders with remittance

The BEEKEEPERS' REVIEW, Northstar, Michigan

Tumbler Shaped Jellies

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them	
Six oz. Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz.....	\$4 50
Gross in 2 doz. paper reshipping case.....	2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs. honey, Bbl. of 21 doz.....	3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at.....	2 75

Prices are f. o. b. Columbus, Ohio.
Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

The Next Issue of

The BOOSTER will be a HUMMER

It will be chuck full of original poems, special appeals, "Pioneer" bills of fare and other good things, all dedicated to you to copy in your local newspapers. This matter will be eagerly accepted by them, and will create great interest in our coming "Honey Day."

This is the greatest number yet. It will make everybody "sit up and take notice," for a fact.

The price of the BOOSTER now, for propaganda purposes is 25c for a whole year. Clubbing rates with either of the other journals is \$1.00 the year. Later the price of the BOOSTER alone will be advanced to \$1.00.

Address

THE BOOSTER

Redkey, Ind.

Beekeeping

Dr. E. F. Phillips' new book **Beekeeping**; edited by L. H. Bailey is the latest out. It contains 457 pages divided into 24 chapters with Appendix and is illustrated with 190 engravings. While the author says the book is not intended as a text book, still it covers nearly the whole ground of beekeeping, and much of it from a scientific standpoint. The fact that it is the production of our Dr. Phillips of the Department of Agriculture, Washington, D. C. is guarantee enough that the book is authentic, so one need not hesitate about reading it with the expectation of being well paid for the time spent in doing so. It is published by The MacMillan Co., New York, price \$2.00, postage extra. It can be had through the Review office at the above price.

We have made arrangements with the publishers so we can club it with the Review a year, both for the price of the book, \$2.00 but to get this very close price postage must be included on two pounds from New York City. Your postmaster can tell you the parcel post rate to New York on 2 lbs. Address with remittance,

The BEEKEEPERS' REVIEW, Northstar, Michigan

The Canadian Horticulturist and Beekeeper

The Only Bee Publication in Canada

It is the official organ of the Ontario Beekeepers' Association and has incorporated with it the former Canadian Bee Journal.

Beekeeping and Horticulture in its various branches are effectively combined to form a live attractive and practical monthly magazine.

Well illustrated and up-to-date. Subscription price postpaid—

Canada—\$1.00 a year.

United States—\$1.25 a year.

Foreign—\$1.50 a year.

Sample Copy sent free on request.

The Horticultural Publishing Co., Limited

Petersboro, Ont., Can.

“falcon” BEE SUPPLIES

SHIPPING CASES, EXTRACTORS, HIVES, ETC., EVERYTHING FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

“Falcon supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

W. T. FALCONER MFG. CO., Falconer N. Y.

Where the Good Beehives Come From

W. H. LAWS' ITALIAN QUEENS

There are no better bees than Laws' Italians. Twenty-seven years careful breeding. My bees have taken premiums in my own and others' hands in many of the states of the Union. A single firm having bought over 6000 queens from me in past seven years say, “Your queens are very satisfactory.” A queen-breeder who is using my breeding-queens says he could well afford to have paid \$25.00 each for such queens ten years ago. Untested queens, 90c; 12 for \$9.00; 100 for \$70.00. Tested queens, \$1.00; 12 for \$10.00; 100 for \$85.00. Select tested, \$2.00; 12 for \$18.00; 50 for \$50.00. Breeding queens, a large number of as fine queens, tried and tested, as breeders, each, \$5.00; six for \$25.00. Prompt attention to all correspondence.

W. H. LAWS, BEEVILLE, BEE COUNTY, TEXAS

TRADE

The REVIEW is now buying all kinds of beekeepers' supplies for the subscribers. We get wholesale prices on all supplies, returning nearly all the difference between the list price and wholesale price to the subscriber ordering. It is the desire of the REVIEW to make only enough out of the supplies bought for the subscriber to pay postage and the cost of advertising. This scheme is so liberal that ALL ought to take advantage of this buying privilege.

Never before in the history of beekeeping have the masses had the privilege of buying their supplies at near wholesale prices, and a person is very short sighted to pay the LONG CATALOG PRICE for his supplies when this privilege of buying at the lower price is open.

Have you got into such a "rut," that you MUST order your goods through the OLD HIGH PRICED channel or are you progressive enough to break away from the "Ties that bind" and come over into the new and better way of buying, i. e. that of buying collectively. Some one has said that it would "take one hundred years to educate the people to the importance of buying collectively.", About ten percent of beekeepers are NOW educated up to this standard and are taking advantage of this grand privilege, and this appeal is to the other ninety per cent who seem not to be able to comprehend that there is a possibility to make their dollars go further than through the OLD, OUT OF DATE way of buying individually.

The dealers will "tickle" when they hear you say, "I'm from Missouri, I have to be shown" for they know the one uttering these sentences is so far behind the times that he will live in the "old rut," to the benefit of the dealer and finally drop out, without ever receiving a single benefit from cooperation. DO NOT BE THE ONE TO STAND BACK TO BE SHOWN, but come to the front and be one that will say "We will show them," and take the word of your old friend Townsend, that we will win, AND IN LESS THAN A HUNDRED YEARS, too.

We hope to add another 10 per cent to the already well pleased 10 per cent that are now buying through the REVIEW, before the end of the year, will you be one of them to save a few dollars by this collective buying!

It would be a "cold day" when Roderick Cameron, Shabbona, Michigan, would buy his supplies otherwise than through the Review, for there is a reason, listen:—On August 13th, he placed an order with the Review for \$30.00 paying 12½ per cent of it with two rebate checks he had received from previous orders. He will get a nice rebate check on this last order, so you see we will have an "endless chain," so to speak, with him (and others too) for you see he could not afford to buy through other sources, where no rebate check would be forth-coming.

Virgil Weaver, Falmouth, Ky. bought 100 cases of 5 lb friction top pails, 12 in a re-shipping case for which we quoted him a special price of \$55.00 per hundred. After making him this unheard of low price, he received back a rebate check of \$3.00 when we mailed him his bill. Do you remember what you had to pay for tin containers before the advent of the National and now the Review has taken hold of this proposition for the producer! Don't you begin to see the possibilities of buying collectively? The Review is now no doubt the largest distributor of Tin Containers for Honey in the world. Is it any wonder then when we ask manufacturers (we buy direct of the manufacturer) for their price on tin containers, that they "take notice" for they know that their answer may make or lose many thousands of dollars in trade. Patronize the bridge that carries you across safely. No matter what any one quotes you for your supply business, we can likely do as well, or better. At any rate you will be used very well.

We could go on and fill this number of the REVIEW with similar instances of well pleased REVIEW customers who have saved all the way from a dollar to \$30.00 on single deals they have bought through the REVIEW, but space forbids mentioning others at this time. You may think you are getting a very close price through the dealer you have been buying of along back, but all we ask is for you to send us the same money you have been paying in the past, you saying of whom you bought, we will take the money and buy at the very closest price possible, returning you the difference, if any. Do not write asking for prices, as we have none, but just make out your order as usual, inclosing the usual amount of exchange, say whose goods you want and we will do the rest.

A trial order will convince you. Hereafter, address all orders for beekeepers' supplies of every sort to

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

Golden and Three Banded Italian Queens For Sale

The Review has made arrangements with the following queen breeders to furnish Review subscribers with queens at their price, listed in other part of this number of the Review. It will be noticed that the list is of the most reliable breeders we have at the present time, and we take pleasure in offering their stock as the very best obtainable at any price, not excepting imported stock. We have spoken for a goodly number of those fine queens, so can promise our readers very prompt delivery at the present time.

The Mr. John M. Davis strain of three banded Italians needs no introduction at this time, his 43 years experience as a breeder for the market has placed his fine stock far above the average, and the beauty of it is, he promised to ship all queens almost by return mail. Order through The Review to be sure of this very prompt service. The price we sell at is given in his advertisement on another page.

Mr. J. P. Moore strain of three banded queens is world renowned for gentleness, hardiness and good honey gathering characteristics. Mr. Hutchinson used to say there was **none better to be had**. Mr. Moore has promised us that he would mail queens by return mail to Review subscribers. An order through the Review would insure prompt delivery.

Mr. Ben G. Davis, breeder of the "Davis" famous "Goldens." Mr. Davis in his strain of goldens has combined honey gathering qualities with beauty and gentleness. There has more favorable comment reached the Review office regarding "Ben's" goldens, as disease resisters than any other breeders. This means that they are a hardy and industrious strain. Ex-Director Buchanan says "they are the best disease resisters I ever saw." Mr. Buchanan was State inspector of apiaries of Tennessee for several years and ought to know. Mr. N. E. Frances says "They are wonderful disease resisting bees." If you are in an European foul brood location, it would look as if this strain would be the one to select as "good housekeepers" to fight this disease with. Mr. Davis has promised to mail Review orders promptly, by return mail.

In requeening this Fall, mail all orders to **THE REVIEW, Northstar, Michigan.**

Honey and Queens

\$16.00 Gets 32 Gallon Barrel Chincappi Honey.

\$20.00 Same amount either Poplar or Black Tupelo Gum Honey.

\$19.20 Gets Carrier of 8 24 lb Cases Fancy 12½ oz. and Better Light Amber Comb Honey.

\$18.00 Same Amount and Quality 11 oz. sections.

\$16.50 Same Amount 10 oz. Lighter Weight 10c lb.

\$ 5.00 Tested Grey Caucasian Queens, Best Stock \$1.50 each.

J. J. WILDER, Cordele, Ga.

Our 1915 Crop of White Clover Extracted Honey For Sale

TOWNSEND'S ULTRA-QUALITY

Gathered from the clean meadows of old Gratiot County, where hardly a single other blossom can be found, except the White and Alsike clover, we can this year offer Clover Extracted Honey in its purity. In the production of this crop of honey, we offer you our forty years' experience in learning how to produce the **very best quality of honey from the very best honey nectar producing plant in the world, White and Alsike clover.** Combs are provided, so no honey is extracted until it is thoroughly cured on the hive, by the bees. Besides this, our honey is produced in **nice clean white combs**, above queen excluders. Last Fall, these white combs were cleaned of all honey adhering to them, by the bees, lest there should be some little old sour honey from last year mixed with this new crop to impair its flavor. Rich, ripe, roapy, are some of the "pet names" given our honey by the consuming public. Of course, this Clover honey, handled as we do, would naturally be of a most delicious flavor, aroma, bouquet. As usual, this 1915 crop of Ultra-quality white clover extracted honey will be canned in brand new, bright, shiny, tin cans, containing 60lb net weight, and crated one and two in a case for shipment, the bulk being crated, two in a crate. It costs some more to produce Townsend's Ultra-quality honey, than the ordinary extracted honey upon the market, then as it is evaporated down so close and heavy body, we do not get so many pounds by this process, consequently have to sell it for a little advance over regular stock. We quote you this fine stock as long as it lasts F. O. B. our station as follows: one 60lb net can cased singly of this best stock at \$6.00 per can; in cases of two cans, one to nine cases inclusive, at 9 cents per pound; 10 or more cases at 8½ cents per pound. Sample free.

Our binding guarantee is that if Townsend's Ultra-Quality extracted honey is not as good honey as you ever bought at any price, or, if for any reason you do not care to accept it upon arrival we will gladly take it off your hands and refund your money, including all freight charges. Could we offer more! Of course you will realize we could not make this offer if our stock of honey was "just ordinary" but Townsend's Ultra-quality extracted honey is not of the ordinary kind, so we do not fear the results of this binding guarantee. Remember there is but one Townsend's Ultra-Quality extracted honey and to secure this splendid brand address

E. D. TOWNSEND & SONS, Northstar, Michigan, U. S. A.

NOTICE TO QUEEN BREEDERS

If you want to sell Queens and Bees, advertise in the **AMERICAN BEE JOURNAL**. Read what some of our advertisers have to say about the pulling power of our advertising pages:

Got good results from the advertisement I ran in last season's Journals.

D. G. LITTLE, Hartley, Iowa.

We have advertised in the American Bee Journal for thirty years. Have always found it a good advertising medium.

J. W. K. SHAW CO., Loreauville, La.

My advertisement brought all the Orders I wished for. In fact, more than I was able to supply. Quite a number of orders had to be returned.

J. A. SIMMONS, Sabinal, Texas.

The American Bee Journal is a good medium for advertisements. We have had all the Orders booked we could fill.

GOLDEN RULE BEE CO., Rialto, Calif.

The Reasons are self evident—a good bee paper is taken by live and wide awake beekeepers and these are the kind that are always in the market for good bees and good queens.

Rates on space are not high. Display at 15 cents a line or \$2.10 per inch. Classified 15 cents a line.

Send in your order with copy today and get rid of your surplus queens.

AMERICAN BEE JOURNAL
HAMILTON, ILLINOIS

TENNESSEE-BRED QUEENS

43 Years Experience in Queen Rearing--Breed 3-Band Italians Only

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
Untested.....	\$1.50	\$ 7.50	\$13.50	\$1.25	\$ 6.50	\$11.50	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Sel. untested	2.00	8.50	13.50	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Tested.....	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Tested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	10.00	18.00

Bees by the pound, 1 lb., \$1.25; 2 lb., \$2.25; 3 lb., \$2.75, July August and September.

Nuclei (no queen) 1 fr. \$1.50; 2 fr. \$2.15; 3 fr. \$2.75; 4 fr. \$3.50; pure 3-band Italians.

Select queen wanted, add price.

Capacity of yard, 5000 queens a year--Select queen tested for breeding \$5.00
The very best queen tested for breeding \$10.

Queens for export will be carefully packed in long distance cages, but safe delivery is not guaranteed.

My father bought queens from you over thirty years ago. They were good ones.

S. D. House, Camilus, N. Y., June 12, 1912.

I have some fifty of your queens that you sold to F. Farr last season, and for beauty, hardness and good honey gathering qualities, they are second to none among our 1,200 colonies.

M. A. Gill, Longmont, Colo., July 7th, 1903.

Six years ago I got six queens from you; they were the finest I ever saw. The six colonies averaged 185 pounds of comb honey.

James I. Davis, Lincoln, Neb., May 24, 1909.

I have one of your queens first year making me seven finished cases; second year, five cases, and this year, two cases at time of supercedure, July 10.

H. G. Henthorne, Plattsville, Col., July 16, 1907.

JOHN M. DAVIS, Spring Hill, Tenn.



10 Great Serials

full of life and action, filled with the fire of fine inspiration and followed by 250 short stories of adventure, will make

The YOUTH'S COMPANION

The Companion will crowd 1916 with the very best for all ages. Twice the amount of reading given in any monthly magazine.

Boys

Everything in it interests the boy. The Boys' Page, the splendid live adventure Serials and Short Stories, sports, games, things to make with tools, and every phase of outdoor and indoor life.

Girls

Special Stories for her own delight. The Girls' Page, suggestions for making "pin money," receipts, hints on everything that makes girl-life glad, from conduct to crochet work and candy making.

Fathers

The strong Editorial Page with its valuable comment on the important questions of the day, the Nature and Science column, and original humor. The rare stories catch him also.

Mothers

Read it all, from Family Page to the Doctor's Corner. The home helps and suggestions, the stories, the Children's Page to read to the little ones, Companion Receipts, and all are hers.

Nine Great Serials, 250 Short Stories, Articles by Famous Men and Women, 1000 Catches of Humor, Suggestions on Care of the Home, Magagement, etc.

Send for Sample Copies of the Paper and "Forecast for 1916"

If You Subscribe Now, sending \$2.00, you will receive the nine November and December issues of 1915—then the 52 issues of 1916 and The Companion Home Calendar.

THE YOUTH'S COMPANION, BOSTON, MASSACHUSETTS

The club—The REVIEW 15 months beginning with the October, 1915 number, with the Companion 14 months, beginning with the November, 1915 numbers, both for only \$2.25.

To get this special bargain, all order must be sent direct to
The BEEKEEPERS' REVIEW, Northstar, Michigan

MAGAZINES AT HALF PRICE

Every Woman Will Want This Trio



EXCEPTIONAL BARGAIN OFFER

Mother's Magazine,	One Year	\$1.50	All Three For \$1.50
Ladies' World	One Year	1.00	
McCall's Magazine (with free pattern)	One Year	.50	
Total Value		\$3.00	

Mother's Magazine

A magazine of service, whose editorial policy is the result of scientific study of the needs of its subscribers. Its special articles and practical department constitute an invaluable reference library for the great home-builder — the Mother. Over half million circulation builded upon forty year's successful experience in dealing with the most intimate home and personal problems.

Ladies' World

The favorite household magazine in over a million homes. The value of its Pure Food Department, conducted by Professor Lewis B. Allyn, is immeasurable. Also specially noted for its absorbingly interesting Fiction. Forty Big Features monthly give it the unique distinction of being the only high-class dollar magazine of general interest in the entire woman's field.

McCall's Magazine

84 to 136 pages monthly --- 50c year
A recognized Fashion Authority for 45 years, with more subscribers than any other fashion magazine. Fifty exclusive designs monthly, showing latest McCall Patterns, whose style, fit, simplicity and economy make them first choice of thousands of well-dressed women. More than 1,200,000 families love McCALL'S for its wholesome stories, sympathetic articles, newest ideas in Fancy Needlework, Home Dressmaking Lessons, Betty Lyle Wilson's own special Receipts, and the many other interesting and helpful departments including Housekeeping Exchange. "I cannot tell you all that it means to me," writes a South Carolina subscriber. "The second copy saved me more than enough to pay for a year's subscription," writes a Texas friend.

Mothers' Magazine	One Year	\$1.50	All Four For	2 ^{.00}
Ladies' World	One Year	1.00		
McCall's Magazine	One Year	.50		
(With Free Pattern)				
The Beekeepers' Review	One Year	1.00		
Total Value	One Year	<u>\$4.00</u>		

To secure this wonderful bargain, address all orders to

The BEEKEEPERS' REVIEW, Northstar, Mich.

Our Special Big Four Magazine Offer! Woman's World--Plain and Fancy Needlework--Home Life

A special arrangement enables us to offer our subscribers for a limited time only THE BEEKEEPERS' REVIEW for one year with a full year's subscription to all three of the above high-grade publications, at the special price of \$1.25.

THREE BIG MAGAZINES AND BEEKEEPERS' REVIEW all for \$1.25



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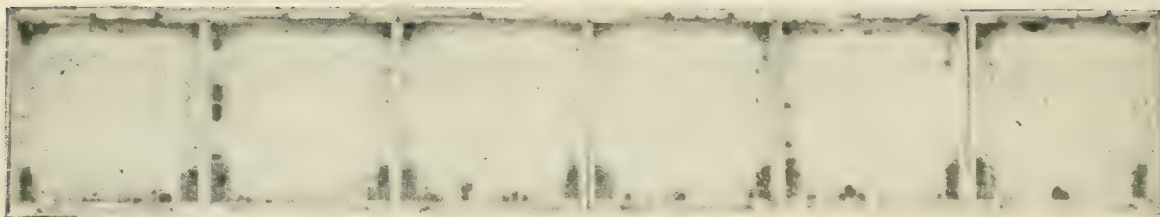
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BEEKEEPERS' REVIEW

Northstar,
Michigan



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb-honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

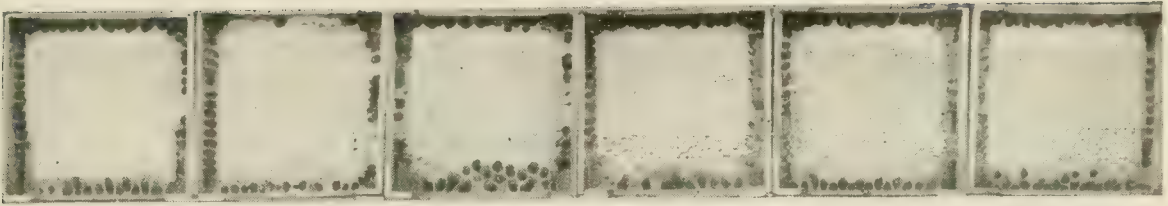
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

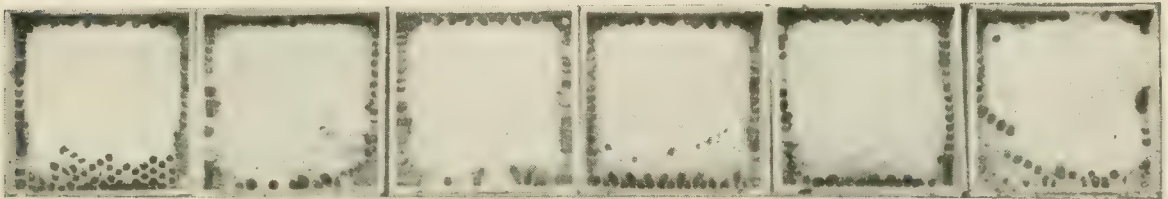
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

I. COMB-HONEY

FANCY—Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than 12 1-2 oz. net, or 13 1-2 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 12 1-2 oz." The front section in each case must be uniform color and finish and shall be true representation of the contents of the case.

NUMBER ONE—Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be uniform color and finish and shall be a true representation of the contents of the case.

NUMBER TWO—This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES—Honey packed in second hand cases. Honey in badly stained or mildewed sections. Honey showing signs of granulation. Leaking, injured or patched up sections. Sections containing honey dew. Sections with more than 50 uncapped cells, or a less number of empty cells. Sections weighing less than the minimum weight. All such honey should be disposed of in the home market.

II. EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W" "L. A." "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

III. STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES—Extracted honey packed in second hand cans. Unripe or fermenting honey, weighing less than 12 lbs. per gallon. Honey contaminated by excessive use of smoke. Honey contaminated by honey dew. Honey not properly strained.

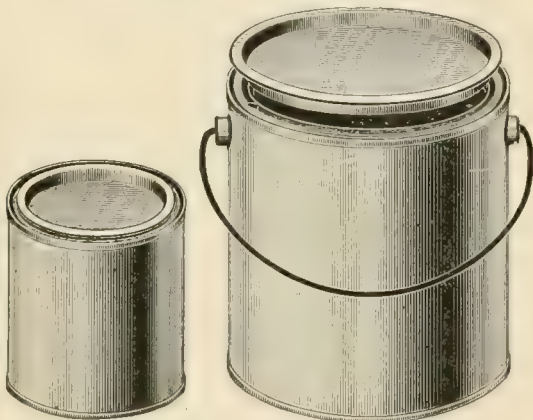
Canco Honey Cans and Pails



PATENTED

Parcel Post Honey Package, oblong can with slotted screw, record seal and rubber gasket. Individual corrugated cartons. 6 lb. and 12 lb. sizes only.

Spencer Friction Top Cans and Pails

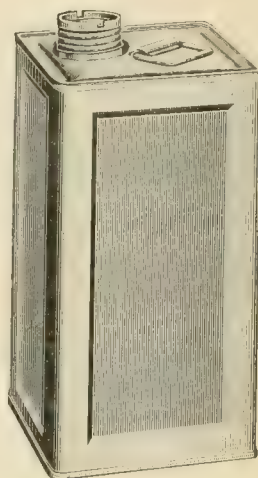


PATENTED

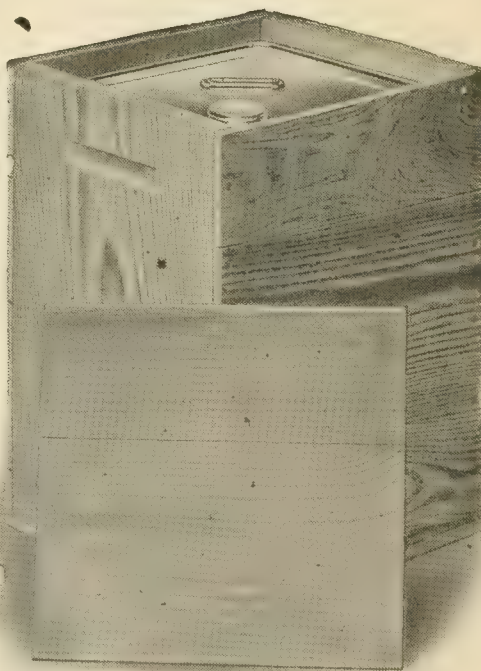
In sizes holding approximately 2 lbs., 2½ lbs., 3 lbs., 5 and 10 lbs.

Write for prices.

PATENTED



1 GALLON SQUARE



60 Pound Square

One and two in case.

American Can Co.

New York Chicago
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TIN CONTAINERS FOR HONEY

FRICITION TOP PAILS



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity		Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can	.....		\$2.25	\$2.15	\$20.00
2½ lb. Can	.....		2.75	2.60	24.00
3 lb. Can	.....		3.00	2.85	28.00
5 lb. Pail	.....	\$5.00	4.75	4.50	42.50
6 lb. Pail	.....	5.25	5.00	4.75	45.00
10 lb. Pail	.....	7.00	6.50	6.25	60.00
12 lb. Pail	.....	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans.....	\$0.60 per case
24 cans in a case, 2½ lb. Cans.....	.71 per case
12 pails in a case, 5 lb. Pails.....	.65 per case
12 pails in a case, 6 lb. Pails.....	.70 per case
6 pails in a case, 10 lb. Pails.....	.49 per case
6 pails in a case, 12 lb. Pails.....	.55 per case

The above containers are known as "buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price.....	\$.33 per case
2 in a case, price.....	.60 per case
2 in a case in lots of 250 cases, price.....	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price.....	58.50 per 100 cases
50 in a crate, price.....	\$10.50 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.	

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @.....	.60c per case
10 in a wooden re-shipping case @.....	.95c per case
50 in one large crate.....	\$3.63 per crate
½ gallon square syrup cans, 1¾ in. screw cap, per crate of 100..	\$5.50
¼ gallon square syrup cans, 1¾ in. screw cap, per crate of 100..	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to Review Subscribers cash with order. Additional discounts in carload lots which can be made up of an assortment of the different cans and pails if so desired.

Address

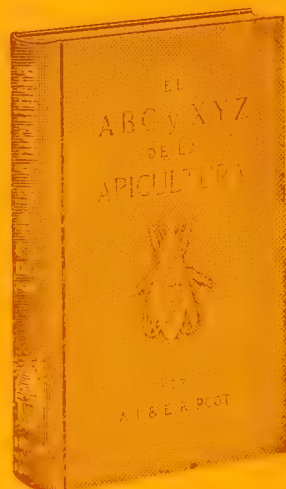
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



The Authoritative Manual on
Apiculture

The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition, a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

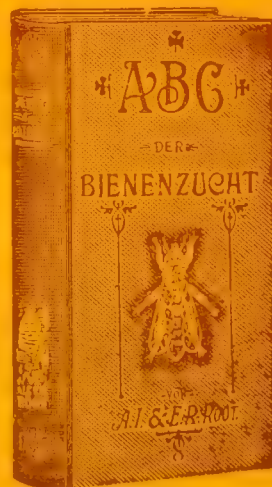
The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth



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MEDINA, OHIO, U.S.A.



The Beekeepers' Review

Published Monthly



DEC.
1915

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F. W. LESSER

E. Syracuse, N. Y., March 1, 1915.

Many other prominent beekeepers write us this way. Our outfit has often secured enough surplus wax to pay for our charge for rendering or more. Send for our terms on rendering and best prices on beeswax. Also the cost of working your Beeswax into

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Hamilton, Illinois

The New Lewis 1916 Catalog is going to be still better than the 1915 edition particularly in the illustrations most of which will be found to be entirely new and of the finest work the engraver is able to produce in this line. As in previous editions all descriptions and lists of prices are comprehensive and very plain.

This new Lewis 1916 Catalog will be out about Jan. 1st. If you have not been receiving the Lewis Catalog annually send in your name at once and we will see that you get your copy promptly when issued.

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The Bee Keepers' Review.



Established in 1888 by the late
W. Z. Hutchinson

OFFICIAL ORGAN OF THE

NATIONAL BEEKEEPERS' ASSOCIATION INC.

AND ITS AFFILIATED ASSOCIATIONS

E. D. TOWNSEND, Managing Editor, Northstar, Michigan

ASSOCIATE EDITORS

WESLEY FOSTER, Boulder, Colo.

PROF. EDWIN G. BALDWIN, Deland, Fla.

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Advertising rates on application.

Forms close 20th of each month.

Vol.XXVIII NORTHSTAR, MICHIGAN, DECEMBER 1, No.12

National Meeting for 1916

The last word from Secretary Foster regarding the 1916 National Convention Meeting, is as follows: The dates February 22-23-24 have been approved, and the place of meeting is in dispute. It seems Chicago, Philadelphia and Washington are the favorites with Chicago apparently first choice.

Honey Day

Mr. J. C. Scholl, Watseka, Ill. mails us a copy of his local paper under date of November 3rd., and we copy as follows: "Eat honey on Thanksgiving Day. It is Honey Day. Scholl for honey." Just two lines, but enough to keep honey before the public. Did you do as much?

Renew Your Subscription to the Review NOW!

Many subscriptions to the Review expire with this December number. We hope to meet every one of you through the Review each month during 1916, and will watch with interest the coming of your renewal. The little red expiration notice in this number will indicate those whose subscription has expired and we ask you to receive it as a special invitation to renew your subscription to the Review for 1916.

The Beekeepers' Review Sold

At both St. Louis and Denver Delegate meetings there were a majority of Delegates present that favored the turning over of the **Review** to some one, so that the National Association could avoid the responsibility of publishing the same. Just as we go to press we are informed that three Directors' votes are in, all casting their vote in favor of turning over the **Review** with all financial obligations to E. D. Townsend, Northstar, Michigan. The other two Directors not yet casting their vote. We hope to publish the contract under which the **Review** is sold and how the Directors voted relative to the sale in the January **Review**.

The Future Policy of The Beekeepers' Review

There will be no radical change in the policy of the **Review** in the months to follow. The present management has had good support by the Board of Directors of the National, that he has formed the policy that the **Review** has followed almost wholly himself during the two and a half years that he has been manager, so but little change in policy may be expected by this transfer. We take this opportunity to thank the Board of Directors, and Officers of the National Beekeepers' Association for their loyal support during the period that we have been manager of the **Review**, for, without this support it would have been much harder for us at this office.

More Financial Aid Promised

Members of the National Association and Subscribers of The **Review**, will receive more Financial aid during 1916 than heretofore.

We have thought out a few more ways that we can help beekeepers financially. We will just mention one of them at present, that is to furnish our subscribers with sugar by the barrel at **wholesale price** for feeding bees, or other use. Over in England and other countries we might mention the associations furnish their members sugar for feeding bees, why not in this country? We are very sure this opportunity will be appreciated very much in this country. We will see!

The Beekeepers' Review Still the Official Organ of The National Beekeepers' Association

The transfer of the **Review** into private hands will make no difference with the service that the National will receive. The **Review** is still the **official organ** of the National, as you will see by referring to the Constitution that we are printing in another part of this number of the **Review**. To sum the matter up, the National will have just the same advantages of the **Review** under the changed ownership, without any financial obligations. This is the feature that the Executive committee have been working for, for the last two years; an official organ without the least financial obligation assumed by the National Association.

On another page of this number of the **Review**, under the caption "The National Field" Secretary Foster defines some things that the National should and should not do to better the beekeeping fraternity. We want to lay especial stress upon a few pertinent remarks made in this letter. He says: "The Na-

tional Association has a large field, but it has in the past confined its work too much to local conditions that can be handled better by local associations." How true! Why go two thousand miles to attend a National convention to discuss how to prevent swarming, when this subject could be discussed in your local association equally as well. We quote further: "The Secretary (National) should have a large fund of information for the guidance of a State College that contemplates putting in a course of beekeeping." "The National should have a definite program regarding the best disease legislation for the various states." "National inspection for interstate shipments will be an open field * * * *." "The adjustment of railroad, express and postal rates on bees, honey and supplies, etc. * * * *." "The National needs a Secretary upon a yearly salary * * * *." and there are other valuable suggestions that should be read by every member of the National. Turn right to it and read "The National Field" next, lest you forget it.

The Constitution of the National Beekeepers' Association

We publish in this number of the Review, the National Constitution as approved by the delegates at the National meeting in Denver last February.

Members should read the Constitution over carefully, so they will be conversant with the terms there-in-laid-down, so as to be ever ready to inform any prospective member of the conditions necessary to become a member.

It will be noted that there is no radical change between this new Constitution and the old one, they both treat in about the same subjects.

There is one change that will effect members in states where no affiliated association is formed, that is, they can now by paying \$1.50 annual dues become members of the National without belonging to an affiliated association. See Article IV, Section 5, of Constitution.

A correspondent of ours, on the East Coast, asks, relative to moving bees; "How do you manage to screen the entrances of your hives, when there is half a peck of bees hanging from it? I have trouble in getting mine to go in."

(We congratulate our correspondent, or any one else for that matter so fortunate, for having so many bees in his hives, that they can hardly all get inside. It is such colonies that "make surplus" and only such that pay dividends. But in reply to the query, we would say, if an empty super is placed on top of all hives to be moved, preferably with drawn combs of over one year age, the bees can easily be smoked into the hives before screening the entrances. It is best not to use more smoke than absolutely necessary, when bees are closed in finally for transit, and often, if given this added room, they will go in over night and none out by the morning; then they can be closed in and moved in perfect safety. The added super is a great feature in moving bees in warm weather, anyhow, as it gives clustering space above the combs, and thus prevents over-heating if the bees become panic-stricken, and raise the temperature over normal. If the weather is hot, the usual cover should be removed, and a special one, two inches deep, covered with wire cloth, be placed on instead. If the cover is left off during the night previous to moving the bees, and the added super also on, the bees are almost sure to be comfortably inside the hive by morning. We have never tried moving bees without screening entrances, but some have reported success with such a plan.)—E. G. B.

A Warning

Be sure and put a **Fragile Tag** on all honey shipped by mail. The Review Corrugated Paper Mailing Case excluded from the mails at Chicago. We have just received the following from Mr. E. B. Rosa, Monroe, Wis. "Had one of your cans break in the mail at Chicago, and they stopped me sending them by mail. I have sent out 300 and only had two complaints. The can (and case—Ed.) is alright but was not handled properly. In another communication Mr. Rosa says: "* * * * I use only two pieces of the corrugated paper, leaving out the long piece, * * * *." Our mailing case is the only three-piece case upon the market that we know of, and when all three pieces are used, the case is two thicknesses of 175 lb. double faced, corrugated paper, making the case double thickness at all points amply strong for parcel post service. We think we are in a position to know, for we have sent out thousands of these mailing cases, in gallons, half gallons and quarts **WITHOUT A SINGLE COMPLAINT**, where the three piece case was used as intended. **ALWAYS**, in mailing honey in the **Review** (or any other) case, see that there is a **RED FRAGILE TAG** on each package, and we **know** there will be no further trouble.

We need a ruling from the Postal Department allowing Fragile articles to be handled **OUTSIDE THE MAIL SACK**. Other countries have such rulings, why not us!

We hope to be able to report in the next number of the Review, that the Chicago postmaster after having the mistake explained to him, has withdrawn this order, excluding the best mailing case for honey ever put upon the market, from the mails. A last word: do not forget the **FRAGILE TAG** when shipping honey by mail in the future.

Low Price Stimulates Consumption

We are pleased to give place to the following under date of October 20th., The Los Angeles Honey Co., (Hamilton & Menderson) write as follows about the honey market conditions of the Pacific coast; "regarding the honey situation in California; beg to say that prices have been low and sales have been liberal in consequence. There is still on hand a pretty fair supply but we think it will clean up pretty well before next season." It is a fact that a low price stimulates a greater consumption, both for table use and baking and manufacturing purposes. A good crop and moderate prices are without a doubt best for all concerned, but California has had a little too much of a good thing for the two last seasons, especially in prices obtained.

There Ought to be Quality Here

We are furnishing Kenneth Hawkins, the "Quality Hill Queen Breeder," of Plainsfield, Ill. one of our "Queens of Quality" mentioned in the last two numbers of the Review, and he will offer queens from one of the Review queen's mothers, crossed with his "Quality Hill" drones during 1916. It is understood that there will be no extra charge for the daughters of the Review queen, but will be sold at the price of his regular stock. Mr. Hawkins' stock of breeders originated from the Davis and Doolittle stock, he buying last year one of Mr. Doolittle's most prolific and best breeders at a fancy price. We do not think one can make a mistake in buying this stock.

The National Field

WESLEY FOSTER, Boulder, Colorado

(Secretary-Treasurer National Beekeepers' Association)

There are not many beekeepers in the United States who do not have definite ideas concerning what measures The National Beekeepers' Association should pursue to better American beekeeping conditions. The main lines of work that such an organization should pursue are fairly well understood, but there are some things that should be more definitely stated.

It is not practicable, nor wise, to pursue work that our State Colleges and Government departments have taken up. True, we can cooperate with them to a great extent, but we should not compete with them. Our efforts will count for more if we work along lines not directly touched by the Government agencies.

One of the greatest works that could be done is to secure, through the National Beekeepers' Association, the prosecution of more work by the various State Colleges and the Government Bureaus at Washington. This can be made an effective field of endeavor. The National Association should have an effective voice in conference with these agencies in determining the way to carry on the various enterprises. We have helped in the honey crop reports that have been instituted, and we should further help in improving and extending this work.

The standardization and color of honeys was taken up with the Government at Washington and while it is too early to expect great returns, this work will be followed up until results are secured.

The National Grading Rules is the first step taken to draft comb-honey rules that would be broad enough for the whole country. By these rules, the Eastern beekeeper, the Southern beekeeper, the Western beekeeper, and the Northern beekeeper can grade his honey and have a well put-up and marketable article.

The extracted honey grading rules cannot be well completed until the Government completes its work on the standardization and color of honey.

It is one of the legitimate fields of the National Association, to not only aid in the formation of local and state associations, but, if the funds of the Association would permit, an organizer should be delegated to get the beemen together and organize them where they are not organized. Here is another place where the National Association should call upon the Government for help. The Bureau of Markets of the Department of Agriculture has one or more men

whose work it is to advise with farmers and help them organize upon a substantial basis. This applies to cooperative associations, especially, although, it is not necessary for an association to be organized upon a business basis to carry through successful cooperative work. The Government encourages social and educational associations to take up carefully planned cooperative buying and selling. Any local or state beekeepers' association could get counsel from the Government on any cooperative venture it wished to undertake. The forms sent out by the Government could be revised by a committee of The National Beekeepers' Association, and rendered of far more use to the beekeepers. The Bureau of Markets would doubtless welcome suggestions of this kind.

The National Association has a large field, but it has in the past confined its work too much to local conditions that can be handled better by local associations. If local associations do not do the work, then perhaps the National should, but the National Convention each year, I dare say, is a disappointment to the majority of beekeepers. It does not come up in quality and real practical worth with the local meetings that many have attended. The reason is that it is a local meeting, the program made up of subjects, most of them of remote interest to the local members. The National Association has spent too much energy (if it has shown any energy to speak of) in social and educational work. The social features lie principally within the province of the local association, and the educational work can be better prosecuted by our State Colleges. The National Association should see that each State College carries on this educational work, leaving the actual prosecution of beekeeping extension to the State Schools.

For a National organization the Secretary should have a large fund of information for the guidance of any State College that contemplates putting in a course of beekeeping. This information can be communicated direct, or through the local affiliated body.

The National Association should have a definite program regarding the best disease legislation for the various states. The National should wield a strong influence in the drafting and passage of disease and inspection legislation. National inspection for interstate shipments will be an open field, and is the direct problem for the National Association.

The adjustment of railroad express and postal rates on bees, honey and supplies is an open field for the National Association. It is surprising what can be done with a little work along these lines when taken up by individuals, and the National Association should be more powerful.

We can get a larger membership, the expense of printing receipts for membership and postage will consume nearly all the funds, so all the benefit you get will be the receipt card and the knowledge that you have helped prolong the painful existence of the so-called National Beekeepers' Association. You will not receive more benefits unless more join and no more will join unless they get more benefits, so there you are.

The National Needs a Secretary on Yearly Salary

The need of an income, of at least \$2500 annually, for the National work is paramount. An office should be maintained with a Secretary on full time. Then, and not till then, will the Association be able to give value and more for the dues paid. The dues should be not less than two dollars a year, unless the income can be increased to more than \$2500 annually.

It is important as an organization, we put first things first. Objection was voiced at the National Convention because the Census Bureau had not done a good job in reporting the number of colonies of bees. Few care very much whether there are fifty thousand colonies or one hundred thousand colonies as long as there are a hundred cars of honey, or perhaps ten million pounds of honey seeking a market at less than the price of sugar, and below the cost of production.

The National Association would do well to assist in the distribution of this honey, so that it might be consumed before another crop is on the market. Suggestions for more attractive and better labels could be given by the Association. Posters to be displayed in grocery stores will greatly help. Interestingly written articles to be printed in the local papers, could be furnished the members. It has long seemed to me to be a mistake to allow good, white space on sections and shipping cases to go to market without good honey publicity matter being printed on them.

There is one benefit that comes from a low price on comb-honey; and that is, more grocers get to handling it and more honey consumers are educated. There is another phase that should be popularized; and that is, "Cook with Honey." The great mass of the people are ignorant of the fact that vast quantities of "cooking" and not "table" honey are produced in the United States and can now be bought for less than the price of sugar.

Outlines of selling methods practiced by successful beekeepers and salesmen should be given more publicity. The National Association can do a great deal in the way of aiding beekeepers to sell their own honey without handling honey in a commercial way.

Probably the greatest obstacle to the National Association's

usefulness is the conflicting interests of the widely scattered membership. Eastern beekeepers do not want Western and Southern honey on their markets, and oppose any action upon the part of the National to assist in the sale of honey if it is Western or Southern honey. The amateur beekeeper is not interested in the commercial side of beekeeping, and so is not in favor of the National aiding its members in a business way. The Agricultural College men and many of the State Inspectors are more interested in beekeeping extension than in the measures designed to give the beekeeper a better price for his honey, and secure for him his supplies for less money.



A part of Ontario Agricultural College Exhibit, at Canadian National Exhibition, 1915

Probably the greatest hindrance to National Association usefulness is the fact that there are not enough members who will sacrifice anything for the National to have a good corps of committees at work. Three or four, are all the workers that have really taken time to help the National, and they have been able to take but a small amount of time. If the National is to succeed with practically no income, more members will have to put up their dues, and a lot of time and money besides.

Guelph, Canada, Sept. 17th, 1915

Editor Review:—I am enclosing a couple of photographs taken of the exhibit of the Apiculture Department of the Ontario Agricultural College at the Canadian National Exhibition.

(Continued on page 458)

The National Beekeepers' Association Inc. And its Affiliated Associations

Officers

DR. BURTON N. GATES, President
.....Amherst, Mass.
FRANK C. PELLETT, Vice President
.....Atlantic, Iowa
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J. H. STONEMAN.....Blackfoot, Idaho
E. J. BAXTER.....Nauvoo, Illinois

Affiliated Associations and Their Secretaries

ARIZONA HONEY EXCHANGE.....
.....G. M. Frizzell, Temple, Ariz.
ADIRONDACK—H. E. Gray, Fort Edward, N.Y.
COLORADO—Wesley Foster....Boulder, Colo.
CHICAGO NORTHWESTERN — E. H.
Bruner, 3836 N. 44th Ave., Chicago, Ill.
HAMPSHIRE—HAMPDEN — FRANKLIN
Dr. Burton N. Gates.....Amherst, Mass.
TWIN FALLS—C. H. Stinson, Twin Falls, Ida.
IDAHO HONEY PRODUCERS' ASS'N—
F. C. Bowman.....Idaho Falls
IDAHO—OREGON HONEY PRODUCERS'
ASS'N INC.—P. S. Farrell.....
.....New Plymouth, Idaho
ILLINOIS—Jas. A. Stone Rt. 4, Springfield, Ill.
INDIANA—Geo. W. Williams....Redkey, Ind.
IOWA—S. W. Snyder.....Center Point, Ia.
KANSAS—O. A. Keen.....Topeka, Kansas
LOUISIANA—L. T. Rogers, Box 361, Shreveport
MASS. SOCIETY OF BEEKEEPERS (Eastern)
—Benjamin P. Sands, 1051 Old S. Bldg.,
Boston.
MONTANA—Percy F. Kolb, 134 Broadwater
Ave., Billings.
MICHIGAN—F. E. Millen.....East Lansing

MINNESOTA—F. W. Ray, Minneapolis, Minn.
MISSOURI APICULTURAL SOCIETY
INC.—Austin D. Wolfe.....Parksville
NEW JERSEY—E. G. Carr, New Egypt, N. J.
N. CALIFORNIA—Alwin P. Helm.....
.....16, Fair Oaks, Calif.
N. MICHIGAN—Ira D. Bartlett.....
.....East Jordan, Mich.
OHIO—F. R. King.....Creola, Ohio
OREGON—Floyd E. Smith.....Dallads, Ore.
THE NEW MEXICO BRANCH.....
Henry C. Barron.....Hagerman, N. M.
PENNSYLVANIA—H. C. Klinger.....
.....Liverpool, Pa.
PUERTO RICO—J. W. VanLeenhoff....
.....Ponce, Puerto Rico, 11 Marina, Ct.
SOUTH IDAHO AND EAST OREGON....
.....R. D. Bradshaw, Fayette, Ida.
TENNESSEE—J. M. Buchanan.....
.....Franklin, Tenn.
TEXAS—H. E. Graham.....Gause, Texas
VERMONT—P. E. Crane.....Middlebury, Vt.
VINTON BEEKEEPERS' ASS'N.....
.....E. J. Winder, Vernal, Utah
WASHINGTON—S. King Clover, R. No. 1
.....Sunnyside, Wash.
WISCONSIN—Gus. Dittmer....Augusta, Wis.
WORCESTER COUNTY—J. S. Whitte-
more.....Leicester, Mass.

If you are a paid-in-advance member of one of the above associations, you are a member of the National Beekeepers' Association in good standing until the end of this fiscal year without additional expense. If you are NOT a member of one of the above associations, you should be. Send \$1.50 to Secretary Wesley Foster, Boulder, Colorado, which will pay for the Beekeepers' Review and your National dues for a year. Local dues are extra, which in most cases is 50 cents a year. A few local Associations have a dollar a year dues; your secretary can inform you along this line. Send in your dues today, waiting is dangerous! If more convenient, the order can come to this office.

Michigan to Celebrate

The Oldest State Beekeepers' Association, Michigan, will celebrate its Fiftieth Annual Meeting on December 15 and 16 at the Eagle Hotel,
Grand Rapids, Michigan

This fiftieth meeting will be unique in many ways. The beekeepers will enjoy a banquet supper, the gift of Messrs G. B. Lewis, Watertown, Wis., and Messrs A. G. Woodman, Grand Rapids, Mich. This will be served at 7:45 on the 15th and a large number is expected to be present.

To commemorate the fiftieth meeting, the association is providing medals as sweepstakes, for the exhibits of bee products. Three medals will be put up for competition. A gold medal, subscribed for by the American bee supply manufacturers; a silver medal, subscribed for by the Michigan Jobbers in bee supplies; and a bronze medal given by the association. These medals will be for the three best exhibits and must be won three times to become the

property of the exhibitor. The gold medal will cost \$50.00 or more, and the silver medal \$20.00, so that exhibitors will have something worth striving for if they are successful in showing a winning exhibit. The medals will be hexagonal in shape and will bear an appropriate design. As the competition is open to all beekeepers, members of the Michigan Affiliated Beekeepers' Association, we shall be pleased to furnish particulars of the classes to any beekeeper desiring to put up an exhibit. Class premiums will also be given.

Besides the banquet and medals, there will be an excellent program, this will be international in character, and includes some of the best known bee-men in America. A glance will show beekeepers that there is an opportunity to meet these men that may not occur again for many years and one that would be a folly to miss.

The headquarters and meeting place will be the Eagle Hotel. This hotel is centrally located and can be reached as follows:—From Lake Shore and New York Central depots take Butterworth and Monroe car to hotel, from Kalamazoo or Holland interurban stations, walk half block to Monroe Avenue, then three blocks to Market Avenue and hotel. From Muskegon interurban alight at Monroe and Market avenues and walk half block to hotel. From the Union depot, hotel is three blocks north to Louis street, then two blocks west to hotel. Rates are \$1.00 and up per night, two in room \$1.50 and up. This year the Northern Michigan Beekeepers' Association are meeting with us. Northern members should write to Mr. Ira D. Bartlett, East Jordan, for particulars. The program, not quite completed, is as follows:—

Wednesday, December 15

10:30 a. m.

Minutes of last meeting

President's Address.....Mr. David Running, Filion, Mich.
Report of the delegate to the National, Denver, Col.,.....Mr. F. Eric Millen,
State Inspector of Apiaries, E. Lansing, Mich.

1:30 p. m.

Appointment of Committees

Running Outyards for Extracted Honey.....Mr. E. D. Townsend,
Editor—Beekeeper's Review, Northstar, Mich.

Notes From the Year's Work.....Mr. Morley Pettit,
Provincial Apiarist, Guelph, Ontario.

Size of the Brood Chamber.....Mr. C. P. Dadant,
Editor—American Bee Journal, Hamilton, Illinois.

Phases of Queen BreedingProf. J. H. Haughey, Berrien Springs, Mich.

Transferring BeesMr. A. H. Guernsey, Ionia, Mich.

Question Box.....Mr. C. F. Smith, Cheboygan, Mich.

7:45 p. m.

Banquet Supper.....Gift of Messrs G. B. Lewis, Watertown, Wis., and
Messrs A. G. Woodman, Grand Rapids, Michigan.

Some Lessons of the Last Half Century.....Dr. E. F. Phillips,
In Charge of Bee-culture, Washington, D. C.

Beekeeping as a Prison Industry and its Reformatory Influence.....
.....Mr. O. H. L. Wernicke,
Chairman Jackson State Prison Board of Control, Grand Rapids, Mich.

Thursday, December 16

8 a. m.

Demonstration in Bottling Honey.....Messrs A. G. Woodman's warehouse.

9 a. m.

Demonstration in Assembling Bee Supplies....Messrs. A. G. Woodman Co.
Business Principles and System a Big Asset in the Success of the Apiarist....

.....Mr. Ira D. Bartlett, East Jordan, Mich.

Which Should Beekeepers Produce, Extracted or Comb-honey Mr. E. R. Root,
Editor—Gleanings in Bee Culture, Medina, Ohio.

What an Inspector SeesMr. F. Eric Millen

Question Box.....Mr. C. F. Smith

Group Photo.

1:00 p. m.

Outdoor WinteringDr. E. F. Phillips

The Bee Business in Canada as Seen by a Trip through Different Provinces....

.....Mr. Morley Pettit.

Reports of Committees.

Awarding of Medals

Election of Officers:—

President, Vice-President, Secretary, Treasurer.

Delegate to the National.

Selection of the place for next years' Meeting

New Business

F. ERIC MILLEN, Secretary-Treasurer,
East Lansing, Michigan

The Market Question

HARRY LATHROP, Bridgeport, Wisconsin

Given at the National Beekeepers' Convention, Denver, Colorado February, 1915

It has been said that honey is such a perfect food that it requires no digestion but passes directly into the circulation.

I think that will be the character of this paper—it will require no digestion.

Once in a while some one bobs up in the journals and suggests that beekeepers have said enough along the line of inducing more competition in the bee business. They might just as well save themselves the trouble; the fact is, beekeepers as a class are so enthusiastic, and have so much good feeling that they can not refrain from portraying to any willing ear, the rosy side of beekeeping. It will continue to be so and no successful producer will ever regret that he felt and talked that way, during his beekeeping career.

This habit of beekeepers, and the work of the bee journals, will do all that is necessary in educating in the best methods of beekeeping. The work of the National Association should be directed to larger matters. A great work of the association is to bring the marketing end of our vocation on to a good business base. Surely there is great need because no business ever presented so many outlandish inconsistencies. Why should honey which is a reliable commodity, and the production of which has been reduced to a scientific basis, be subject in the marketing to so many odd twists and capers, like a veritable jumping jack.

Such is not true of similar staples. Sugar a staple article of general use, is sold all over the country at uniform prices. That is the condition of affairs toward which we should strive to bring the marketing of honey. We must depart from some former methods. The effort of some has been to sell in small quantities at very high prices. Small packages tend to high prices and small consumption. What we want is a reasonable price, a large consumption and a universal demand. We could have it if honey were placed where it belongs in the economy of the home. Take my own state of Wisconsin for example; it is splendid honey producing territory both as to quantity and quality. There are really only a few beekeepers and only a small production of honey. On the other hand the state is simply flooded with the miserable and unhealthful glucose mixtures.

If there was the same ready market for honey that there is for butter and eggs, more honey would be produced, more people would find happy homes on the product of the bee. What we should work to bring about is the uniform quality, uniform package and uniform price. Heretofore many beekeepers have been forced to take a low price for their honey, but the housekeeper has paid so much that no honey habit could be formed and it would not become a staple in the home. Bringing the consumer and producer as close together as possible is a desirable end. The mail order method is a great help. In my own practice I ship many packages to families direct by express. The parcel post can be used to some extent, especially on the rural routes. Discard very small packages as much as possible, they are not necessary. To illustrate; a few days ago a lady called me on the phone, "Hello! have you any extracted honey?" "Yes." "Well we've got the whooping cough out here, can you send a quart by parcel post?" "I have none in quarts, ten pound pail is the smallest." "Well send that then." So the ten pound pail was sent. I charged one dollar and ten cents for the package and the postage was ten cents more. In this case a gain was made for all parties concerned by reason of having no package smaller than ten pounds.

Well, some one will ask, "What can we do?" We can't do much to be sure with such a small membership. We must work to organize the beekeepers, then we should look to larger methods. Central warehouses with grading departments under expert management may have to be provided, where any producer can send his honey and receive the value thereof in cash or in a warehouse receipt which would bring the cash later. These things could be done with cooperation. Without cooperation things will go on as they have been and the glucose factories will get the money from the people.

In regard to prices, there is no system at present. I sold some extracted honey to a commission man at ten cents per pound. He told me later that he put it in small packages and got twenty-one cents selling it to retailers. What the consumer paid is more than I can tell, but probably twenty-five or thirty cents per pound.

How many beekeepers would pay such prices if they should be found among the consumers having given up production? You know that as a class we would not pay such prices. We have had honey on our table every day for thirty years or more, but I am free to say, I would not pay twenty to thirty cents for extracted honey. Would I use Karo? Don't think it for a minute. I would not use that insipid, impure, chemical compound if I never had any sweet to grace a pan cake. But I tell you what I could do. I could get pure southern cane syrup delivered up north at no more than one dollar per gallon. A little sorghum would come in handy at times, likewise maple syrup, or good

syrup could be made from brown sugar of the right variety. So you must understand that we can not build up a reliable market unless we get the general public to using honey the same as they use sugar or butter. We can not do it by giving them no better service than to provide them tumblers or pints sold through a grocer at an exorbitant price, when at the same time that grocer is selling sugar at a profit that amounts to almost nothing. Neither should we leave them at the mercy of pedlers who will buy the honey from the hard working producer at about seven cents a pound and charge the housewife twenty-five cents for it and then brag about it. Let there be an evening up. In such cases the producer should receive more and the consumer should pay less. We must do as we would be done by. Beekeepers, knowing what a blessing honey has been in your own home and to your own little ones; should you not have an ambition, a desire, to see it in general use in the homes of the land, for the good of the people as well as for the good of our industry?

Marketing Honey

J. C. BULL, Hammond, Ind.

Given at the National Beekeepers' Convention, Denver, Colorado, February, 1915

The subject assigned to me is a large one. In fact it is the largest problem before the American Beekeeper today. In the past we have devoted all our time and attention to producing honey and have paid little or no attention to making or developing a market. When we have a large crop of honey we are at a loss to know what to do with it. About the first thing we do is to send it to some honey dealer or commission merchant to sell for us. What happens? The big honey markets are flooded with honey while the chances are that our own home and nearby market is left undisturbed, whereas if we had given our home markets all the honey they would consume we would have to buy honey to satisfy our home market. Before we start out to develop a market for our product we will have to have something to market. What are we trying to sell at the present time? Unripe honey, unstrained, all kinds of flavors and colors put up in all kinds of packages and sold for every known price. How are the famous Rocky Ford cantaloups sold? Do they ship them to market in barrels, boxes, baskets, or any old thing with all kinds, sizes and shapes mixed together? No, they have a uniform size crate made to hold just so many and it is packed with a certain variety of cantaloups of a uniform size and ripeness.

It is true we have grading rules for comb-honey but how about extracted honey? The fact that honey is gathered from so many different sources with as many different colors and flavors makes it a hard thing to get it on the consumer's table so it will please her. With the average person honey is honey and should be all alike. There is only one thing to do and that is to sell honey that is all alike. How is that going to be accomplished when part of our crop is a mild flavored white honey and part is a strong flavored amber? Almost anything can be accomplished by blending. You can take a sample of pure white clover honey and then take samples of other honeys and make a duplicate of the clover so that an expert can not tell the difference by the taste or looks.

Another big item we have got to contend with, is granulation of honey.

Only a very small per cent of the general public know anything about granulation.

Just as soon as a can of honey commences to granulate the housewife is satisfied she has been fleeced and has gotten sugar syrup instead of honey.

That is especially true of Alfalfa honey. If Alfalfa honey goes on the table of a consumer in the eastern states where the consumer is used to a stronger flavored honey and it then granulates in a few days the customer is sure it is not honey.

For those two reasons, its mild flavor and its tendency to granulate so soon I do not attempt to sell it alone. I first have to blend it with a stronger flavored honey. I don't know how it is here in Colorado but in the vicinity of Chicago it is a favorite stunt of a whole lot of beekeepers to see who can get the least money for their honey. Beekeepers within 100 miles of Chicago will send their finest clover and basswood honey to Chicago, express prepaid for \$1.25 for a 10 pound can. We also have some that go out and sell by house to house soliciting for \$1.00 for a ten pound can of extracted honey. Again I have heard beekeepers get up in a convention and tell how much they sold honey for to their grocer and then when some one would come to their home to get some honey they would let them have it at the same price as the grocer paid. What kind of a chance has that grocer got to sell honey? If you take those same beekeepers to task for it they will say it is just as easy to sell it to the consumer as the grocer so why should they ask the consumer more than the grocer. Now let's see what effect such practices have on the honey market. Here is a neighborhood that will use one hundred pounds of honey during the winter. Mrs. C. through a friend secures a can of that cheap honey. She tells the balance of her neighbors how much she paid for it but she doesn't know the party's name who has it so none of the rest get any. Here comes a beekeeper selling his honey house to house at the retail price, which is what it is worth. He remembers selling one hundred pounds in this certain little neighborhood last year. When he comes to sell them some more this year what happens? Oh they will tell him, Mrs. C. got a can for \$1.25, we won't pay you \$1.75 for it. They do not know where and would not send if they did know so they do without honey that winter. Mr. Cheap Beekeeper sold ten pounds of honey and killed the sale of ninety pounds more. The only thing that surprises me is that we sell as much honey as we do. The grocer is the best friend we have today, so let's help him instead of hindering. The biggest thing we can do is to not undersell him. You can talk about educating the consumer. The one to educate is the producer. How many producers can tell you what it costs a pound to put honey on the consumer's table? I am talking to producers who have not retailed their crop. Can you by acting the part of the middleman put honey on the table of the consumer at a less cost than it can be sold through the general channel, which is the retail grocery?

If you can and you are giving the consumer an article as good or better than she has been getting, then who does that saving belong to? The consumer is getting her money's worth and is well satisfied, so that is settled. How much is the beekeeper's time worth to go out and sell honey? How much is your time worth in the bee-yard? Is it not worth as much as in selling honey?

I say most assuredly it is. You may say it takes years to learn how to keep bees. I suppose you can go out and be a full fledged honey salesman in a day. If you think so I would advise you to go out and see what kind of a salesman you are. In summing up just remember this: put out a strictly first

class article, an article you can duplicate exactly when you sell again and above all things, ask a price that your goods are worth.

Beekeeping

E. F. PHILLIPS

“A Discussion of the Life of the Honeybee and of the Production of Honey” *

Review by Associate Editor Edwin G. Baldwin

So reads the title and caption of the latest addition to the ranks of the world's bee-books. Over two thousand years ago an inspired sage wrote, “of making many books there is no end,” and his prophecy is daily being fulfilled. When a new book on apiculture appears in the already well represented field, a decent respect for the opinions of the editorial and authorship world demands, that there shall be set forth some valid reasons for its existence.

In the case of the volume under consideration, it is apparent that two features of it will amply justify its publication; first, much new and original matter; second, unique lines of presentation of matter already known.

To the new matter in the book subsequent allusion will be made at the proper place. The originality of presentation is best seen by a perusal of the book itself. The novelty of the treatise lies in the “effort to present a logical discussion of the various phases of the complex subject of *Beekeeping*,” to quote from the author's own preface, italics ours.

At first blush it might appear, that the author, by inuendo at least, gently condemned all previous apicultural works as being illogical. A careful study of the book, however, is a perfect corrective of any erroneous impression that one might have gained from the first sentence in the preface.

Very early in the book, however, and all through its pages we can see the workings of an orderly mind, the effort of a scientific brain to reduce the complex and often confusing ideas of data and operations and theories of bee-keeping to the hard and fast principles of technical analysis—in short, to make a scientific treatise of the entire subject. It is safe to affirm, at the outset, that the author has succeeded in his effort. From preface to appendix it is foundations, underlying principles, that are held constantly and consistently before the readers. And so we may safely affirm, without termine any other presentations illogical, that no other treatise approaches the subject at just the angle presented in this book.

We append herewith a resume of the contents, by chapters.

- | | |
|---------------------------------------|------------------------------------|
| I. Beekeeping as an Occupation. | VIII. Reproductive Processes and |
| II. Apparatus. | Parthenogenesis. |
| III. The Colony and its Organization. | IX. Races of Bees. |
| IV. The Cycle of the Year. | X. Regional Differences within the |
| V. The Life of the Individual in Re- | United States. |
| lation to the Colony | XI. The First Steps in Beekeeping. |
| VI. The Life Processes of the Indi- | XII. Apiary Site. |
| vidual. | XIII. Manipulation of Bees. |
| VII. The Nervous System and the | XIV. Spring Management. |
| Senses. | XV. Swarm Control and Increase. |

(*The Rural Science Series. The MacMillan Co, New York. 1915. Price, cloth \$2.00.)

(To be continued)

Selling Extracted Honey

ELMER HUTCHINSON, Lake City, Michigan

Given at the National Beekeepers' Convention, Denver, Colorado, February, 1915

There are many beekeepers, who produce large crops of very fine extracted honey, that fail to sell the same for as much as they could, or should.

I am not going to write of all the different ways there are of selling honey for a better price than the dealers will pay. I will simply outline the way I sell my own honey for two or three cents more per pound than I could secure by selling to some dealer for a lump sum.

I advertise it for sale in several of the bee journals, then send out circulars to a large list of names I have, giving brief description of the way in which our honey is produced, enlarging somewhat on the superior qualities of our honey. I wish to state right here that the crux of the whole matter of building up a successful mail order business is that the honey sold **must be a superior quality** to the ordinary extracted honey found on the market. You must convince a customer, not through your advertising, but through the goods you sell, that your honey is better than they can get elsewhere. There is no money in selling honey through a mail order business unless you can hold the most of your customers year after year.



A part of Ontario Agricultural College Exhibit, at Canadian National Exhibition, 1915

(Continued from page 450)

This exhibit occupied one table and part of another, the rest of the end of the building being taken up by other Departments of the College. The exhibit consisted of a model of an apiary constructed of hives built to scale three inches to the foot. These were arranged in order as they would be in the regular apiary, the table being covered with green burlap to represent sod, and the hives interspersed with small palms and ferns to represent trees and shrubbery. There was also a model of a quadruple hive winter case also built to scale, and several small implements used in beekeeping including the gearing of a new friction drive power honey extractor.

The feature of the exhibit which attracted the most attention, however, was a tall observation hive containing five Langstroth combs, one above the other, covered with bees, also a single comb observation hive and a pound package of bees. An attendant was constantly in charge of this exhibit during the two weeks of the exhibition, and was kept busy most of the time answering questions about bees and honey.

This Canadian National Exhibition is an annual affair, which has been conducted for a great many years. In 1913 there was a total attendance during the two weeks of about one million people. Owing to war conditions, however, the attendance this year was a few hundred thousand less than that, although it was more than last year. As the entertainment features of the exhibit are very small comparatively and are confined to the midway which is placed off in one corner of the grounds, the educational value of this exhibition on the whole is very great.

Yours very truly,

MORLEY PETTIT,
Provincial Apiarist.

By-laws of the National Beekeepers' Association

ARTICLE I, Name

SECTION I. The name of this organization shall be the National Beekeepers' Association.

ARTICLE II, Objects

SECTION I. The object of this organization shall be to promote the interests of beekeeping by the dissemination of useful and scientific knowledge concerning the care of honeybees and their products; the care of and marketing of hive products, to promote social relations between those engaged in beekeeping, to create and maintain greater public interest in beekeeping and its importance in relation to agriculture and horticulture, and to advance the welfare of the members by all means not inconsistent with the law of the land and by the by-laws of the Association.

ARTICLE III, Powers

SECTION I. The association shall have power

- (a) To have and keep a corporate seal.
- (b) To hold under its corporate name such property as shall be deemed necessary and useful in carrying out the purposes of its organization.
- (c) To print, publish and distribute such magazines, papers or other publications or periodicals as may be deemed essential to the purposes of the Association.
- (d) To promote lecture courses, field meetings and other educational means and methods in the science of beekeeping, as shall be deemed best calculated to promote the welfare of the Association and its members.
- (e) To sell, lease or otherwise dispose of any property of the Association no longer needed in carrying on its purposes.

ARTICLE IV, Membership

SECTION I. Membership shall be limited to persons who are in sympathy with the purposes of this Association.

SECTION II. All persons engaged in beekeeping or kindred occupations, either for profit or pleasure may become members of this Association by making application in writing, therefor, to the Secretary of the Association.

SECTION III. Any Association or Society heretofore or hereafter or-

ganized for purposes in harmony with the objects of this Association, may affiliate with this Association by adopting resolutions therefor and making application to the Secretary of this Association and receiving a majority of the votes of the members present at any regular meeting or special meeting, whereupon the members of said Affiliated Organization become members of this Association.

SECTION IV. Each Affiliated Association shall be entitled to elect one delegate to attend the National Meeting, who shall present proper credentials, and, if correct, such delegate shall be entitled to one vote for every fifty members or fractions thereof in this local Association.

SECTION V. A membership fee of one dollar and fifty cents per annum shall be paid by each member of the Association, whether such member becomes so by affiliation of the organization of which he is a member, or otherwise.

SECTION VI. Membership in this Association shall cease upon failure to pay the annual fees, or to conform with the provisions of the charter and By-laws of this Association.

ARTICLE V, Officers

SECTION I. The officers of this Association shall be a President, Vice-President and Secretary-Treasurer, who shall hold their respective offices for one year, or until their successors are elected and qualified, and a board of five directors who shall hold their offices for a period of two years or until their successors are elected and qualified. The officers and Directors shall be elected at the annual meeting of the Association each year, provided that two Directors shall be elected in odd years and three Directors shall be elected in even years.

ARTICLE VI, Duties of Officers

SECTION I. The duties of the President shall be to preside at all regular and special meetings of the Association and act as chairman of the Board of Directors.

SECTION II. The duties of the Vice-President shall be to preside in the absence of the President.

SECTION III. The duties of the Secretary-Treasurer shall be to keep a record of the proceedings of the meetings of the Association with their addresses, collect, receipt and care for the membership fees and all funds of the Association, unless otherwise ordered by the Directors, place such funds in such depository as may be provided by the Directors and shall pay out such money in the way and manner authorized by the Board of Directors, and perform such other duties as shall be required of him by the laws governing the Association.

SECTION IV. The duties of the Board of Directors shall be to have general supervision of the affairs of the Association, fix the compensation of its various officers and employees, authorize the making of contracts of the Association, direct the disbursement of the funds, approve all bills against the Association and perform such other duties as may from time to time be imposed upon them by the By-laws of the Association.

ARTICLE VII, Committees

SECTION I. The standing committees of this Association shall consist

of an executive committee, consisting of the President, Vice-President and Secretary-Treasurer and such other committees as may from time to time be created by By-laws or Resolution.

SECTION II. The executive committee shall have charge of all routine and executive work which may require attention in the interim between the meeting of the Board of Directors.

ARTICLE VIII, Meetings

SECTION I. The annual meeting of the Association shall be held during the month of February of each year, the exact date to be determined by the Executive Committee and the Board of Directors. The Annual Meetings shall be composed of members of the Association in good standing and duly accredited delegates, selected by the Affiliated Associations.

SECTION II. Special meeting of the Association may be called at any time by the Executive Committee.

SECTION III. The Regular Meeting of the Board of Directors shall be held immediately following the annual meeting.

SECTION IV. Special meeting of the Board of Directors may be called at any time by the President of the Association.

ARTICLE IX, Funds

SECTION I. There shall be created a fund to be known as the General Fund and also a fund to be known as the Subscription fund. One-third of the membership fee, hereinbefore provided, shall go into the General fund and two-thirds into the Subscription fund.

SECTION II. The expenses of carrying on the business of the Association, including the compensation of the various officers and other expenses not otherwise provided for, shall be paid out of the General fund. The Subscription fund and all surplus moneys remaining after the necessary expenses of the Association have been paid, shall be expended as the Association shall direct, in the circulation of literature in relation to beekeeping, to provide lecture courses and such other educational means and methods as may be deemed essential to the interest of the Association and its members.

ARTICLE X, Amendments

SECTION I. These By-laws may be amended at any regular meeting of the Association, by a two-thirds vote of the delegates present, provided, however, that at least ninety days notice has been given to all affiliated Associations of the proposed amendment.

WESLEY FOSTER, Secretary.

Indiana Beekeepers' Association

The Indiana Beekeepers' Association will meet in the State House, Indianapolis on Dec. 10-11. A number of good speakers will be in attendance, including Dr. Phillips and E. R. Root.

The postmaster of Indianapolis will give the outline of the Parcel Post plans for selling honey direct to the consumer. This will be well worth a long trip to hear. We are expecting a good attendance.

GEO. W. WILLIAMS, Secretary.

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Chittinaugo, N. Y.
Oct. 7, 1915

Mr. E. D. Townsend,

Dear Sir:—Enclosed find one dollar to pay balance on honey jars ordered Sept. 26. Am pleased that you ordered the third gross.

Thanking you for helping me get the goods at so great a reduction.

I remain yours truly,

BURDETT HALL.

The New York State Association of Beekeepers' Societies

Will hold their annual convention on Dec. 7th and 8th in the Court House in Syracuse, N. Y. This being a fairly good year for honey in this state we expect a good attendance and a very pleasant and profitable meeting. Be one of the crowd at Syracuse on Dec. 7th and 8th.

IRVING KINYON,
Secretary.

Bee Meetings Next Fall

Some time ago a committee was appointed to arrange the dates of next winter's conventions on the circuit plan as far as possible. Several months have been required to arrange the dates to the satisfaction of all concerned. The States joining in the circuit and the dates on which convention will be held are as follows:

1. Ohio Nov. 26-27.
2. Illinois Nov. 29-30
3. Kansas Dec. 1-2.
4. Missouri Dec. 3-4.
5. Minnesota Dec. 7-8.
6. Wisconsin Dec. 9-10
7. Indiana Dec. 10-11.
8. Iowa Dec. 13, 14, 15
9. Michigan Dec. 15-16.
10. Chicago-Northwestern Dec. 17-18.

From the above dates it will be seen that conventions will be in session continuously excepting Sundays. By this plan, speakers of prominence will be able to attend a number of conventions without inconvenience. If the dates could have been conveniently arranged,

less travel would have been necessary by having adjoining States follow each other. Some dates were fixed and the other meetings had to be adjusted to them. It is to be hoped that the circuit plan will prove so popular that somewhat more convenient arrangements may be possible another year. The location of the various State conventions will be announced by their respective secretaries. Some locations have apparently not yet been selected.

FRANK C. PELLETT.

Classified Department

Notices will be inserted in this department at ten cents per line. Minimum charge will be fifty cents. Copy should be sent early and may be for anything the beekeeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

HONEY AND WAX

HONEY LABELS—Lowest price. **EASTERN LABEL COMPANY**, formerly Pearl Card Co., Clintonville, Conn.

FOR SALE—Fine quality Raspberry-Milkweed honey in new 60 lb cans (2 in case). Write for sample and price. **P. W. SOWIN-SKI**, Bellaire, Mich. tf

WANTED—Pure beeswax in any quantity. State quantity and lowest price for spot cash here. **WM. H. FICK**, 124 W. Kenzie St., Chicago, Ill.

FOR SALE—Ten cases of two 60 lb net cans of beautiful white clover extracted honey, at 9c per pound. New cans and cases. Sample free. Address **RAY C. AUSTIN**, Ashley, Mich.

BEEKEEPERS needing white alfalfa extracted honey can secure fine stock at \$9.75 per case of two 60 pound cans, f. o. b., Boulder, Colorado. **WESLEY FOSTER**, Boulder, Colorado.

FOR SALE—A carload or less of Clover extracted honey in new 60 lb net tin cans, two in a case for shipment at 7c per pound, on track. Sample free. **F. C. HUTCHINS**, Santa Clara, N. Y.

FOR SALE—Eleven cases, two new 60 lb. cans in a case, of extra fine clover-basswood extracted honey, stored over excluders and extracted at end of season, at 9c per lb. **DR. C. G. LUFT & SON**, Fremont, Ohio.

5,000 lbs. Buckwheat-Goldenrod blend extracted honey for sale. Two 5 gal. cans to the case—120 lbs. net., \$8.00 (6 2-3c per pound). Can ship at once. **IRA D. BARTLETT**, East Jordan, Michigan.

FOR SALE—White extracted honey 7c, light amber 6c, two 60 pound cans to case, 12 five pound pails in a case, for \$6. or a case of six ten pound pails for \$6. Honey in pails is light amber and all honey is well ripened and mild flavor. **H. G. QUIRIN**, Bellevue, O.

WANTED—Comb extracted honey and beeswax. **R. A. BURNETT & CO.**, 173 So. Water St., Chicago.

FOR SALE—Fancy sweet clover extracted honey in cases of 120 lb net at 7c per pound. In cases of 12-5 lb friction top buckets (pails) @ only \$5.00 per case, 60 lb net. Send cash. **VIRGIL WEAVER**, Falmouth, Ky. tf

FOR SALE—A carload or less of light amber extracted honey for table use. Gathered from Mesquite and Horsemint. Ask for sample and state quantity wanted and will quote our lowest price. Address **JNO. F. SHAW**, Atascosa, Texas.

FOR SALE—Water white Alfalfa, White Clover, Amber Alfalfa and Amber Fall honey in 60 pound cans or smaller packages. Amber Fall honey is of our own extracting and can also be furnished in barrels. Write for sample of kind desired and state quantity you can use. **DADANT & SONS**, Hamilton, Illinois. tf

Choice White Clover Extracted Honey for Sale

Left upon the hives until thoroughly cured by the bees; put up in new 60 pound tin cans, one and two in a case for shipment. This thoroughly-cured-upon-the-hive honey is a little higher in price than the ordinary, something in comparison with creamery and the ordinary store butter. I quote a price of \$6.00 for a single can, or 9 cents per pound in lots less than ten cases, two cans to the case. For ten cases or more the price will be 8½ cents per pound. Above prices are free on board the cars here. Sample free. Address, **D. R. TOWNSEND**, Northstar, Mich.

CHICAGO—Arrivals of honey, both comb and extracted, are in excess of the demand at this time. Yet, that is a normal condition, as it pays to get comb-honey into the market before the cold weather, which always has a tendency to take the elasticity out of the comb; thus making it more liable to break away from the wood.

There is no material change in prices of the best grades of white comb, although sellers to obtain a sale of a large quantity will lower the price, which now ranges at from 16c to 17c per lb. for the two highest grades. Amber grades range at from 12c to 14c per lb. Sections with more than one color and empty cells brings from 10c to 12c per lb. White extracted honey ranges in price from 7c to 9c per lb., sales being chiefly made at 8c per lb. as only a very ripe high flavored honey will sell at 9c per lb. and that in a single can or case way. Ambers are ranging from 5½c to 6c per lb. with some highly flavored, ripe and of heavy body at 7c per lb. Beeswax is dull at 28c and 30c per lb.

November 16.

R. A. BURNETT & CO.,
173 W. South Water Street.

BEEES AND QUEENS

FOR SALE—100 Colonies Bees, in new ten frame hives, all on full sheet foundation, wired frames. All queened this year. **S. F. LAWRENCE**, Hardin, Montana.

MISCELLANEOUS

HONEY LABELS—Catalogue and prices free for the asking. **EASTERN LABEL CO.**, (Formerly Pearl Card Co.,) Clintonville, Ct.

WANT TO SEND YOU our catalogue and price list of beehives and fixtures. They are nice and cheap. **WHITE MFG. CO.,** Greenville, Tex.

WANTED—A position with Southern beekeeper. Florida preferred. Five months or less, experienced, reasonable, reference, etc. **EDWARD HASSINGER, JR.,** R. 16, Box 6, Greenville, Wis.

FOR SALE—A 50 acre farm, new house, good barn and out buildings, on pike road. Also 100 stands bees with all fixtures for running. Price reasonable. Address **HARRY E. KEEL,** R. D. 2, Madison, Ind.

HONEY LABELS of the better sort. Lowest prices.. Honey advertisers that sell your honey. Printing for Beekeepers. Catalogue free. **LIBERTY PUBLISHING COMPANY,** Sta. D, Box 4J Cleveland, Ohio.

4000 gummed labels $1\frac{1}{4} \times 2\frac{1}{4}$ printed in two colors, \$1.00. Eat Honey labels 1000 for 30c, 5000 for \$1.00. Estimates free on all class of work. **LABEL SHOP,** 186 Meadow Street, New Haven, Connecticut.

FOR SALE CHEAP—In good location $32\frac{3}{4}$ acre farm, nice house, good barn, stable, sheds, workshop, 50 stands of bees, extra hives, etc. For full information address **J. A. JANSSEN,** R. F. D. 4, Charlevoix, Mich.

We have made arrangements whereby we can club the *Reliable Poultry Journal* and the *Beekeepers' Review*, both for a year at only \$1.15. The *Reliable Poultry Journal* charges 25c additional to Canadian subscribers for postage.

HONEY JARS FOR SALE—About twenty gross, square glass honey jars, glass top and spring fastener, from one-half to two pounds. In original packages at less than factory prices. Have quit the bottling business. **W. H. SETTLE,** Gridley, Ill.

Glue for Sticking Labels on Tin

We can furnish glue for sticking labels on tin containers and ship with our tin orders from Detroit, Mich. at 35c per quart, or a dollar per gallon. No more loose labels on tin containers, when using **Eureka Paste.** Address **THE BEEKEEPERS' REVIEW,** Northstar, Michigan.

Sample Mailing Cases for Members

Members can help out the work at this office a considerable if they will order their sample mailing cases for sending samples of honey, direct from the Mfg's. Send a dollar, plus postage on 4 lbs. to the **U. S. MAILING CASE CO.,** Lowell, Mass., ordering 2 doz. No. 40 Cases, Bottles and Corks to go by parcel post. One gross by express at \$5.41. Cash with order.

BOOKS ON PRACTICAL BEE CULTURE

Mailed Post Paid Upon Receipt of Price	
A B C and X Y Z of Bee Culture, cloth	\$2.00
A B C and X Y Z of Bee Culture half leather	2.75
A B C and X Y Z of Bee Culture, German	2.50
A B C de L'Apiculture, French ed.	2.00
El A B C and X Y Z de la Apicultura, Spanish	2.50
Beekeeping—Phillips	2.00
Langstroth on the Hive and Honeybee Reprint	1.00
Advanced Bee Culture, W. Z. Hutchinson	1.00
Biggle Bee Book	.50
British Beekeepers' Guidebook, Cowan..	1.00
Cook's Manual of the Apiary	1.15
Doolittle's Queen-rearing	1.00
Fifty Years Among the Bees, C. C. Miller	1.00
First Lessons in Beekeeping	.50
Honey Bee, The—Cowan	1.00
How to Keep Bees—Mrs. Comstock	1.00
Humble Bee, The—F. W. L. Sladen	3.25
Irish Bee Guide, Rev. J. G. Digges	1.00
Langstroth, Rev. by Dadant, cloth	1.25
Modern Bee Farm, S. Simmons	2.00
Quimby's New Beekeeping	1.00
Wax Craft	1.00
Increase; Forcing the Queen to Lay; each	.25
French edition, separate	.50
POPULAR BOOKS ON BEE CULTURE	
Bee People, The, Margaret M. Morley	\$1.50
Children's Story of the Bee	2.00
Honey Makers, The, Margaret M. Morley	1.50
Life of the Bee, Maeterlinck	1.40
Bee Master of Warrilow, The—Edwards	.57
Lore of the Honey Bee	2.00
Queenie	.75
Bee Models	each 50c; 2 for .75

Address All Orders

THE BEEKEEPERS' REVIEW

Northstar, Michigan

Review Subscribers Having Bees For Sale

Paid-in-advance subscribers having bees for sale can have them listed below, twice, each year free. If they are to be listed longer, 20c each insertion will be charged. This list is not intended for Dealers, but is intended for subscribers who for some reason or other want to dispose of a part or all of their bees. Figures following address indicate number of colonies each has for sale. To get listed, request must reach this office not later than the 15th of the previous month.

Robert E. Foster, Rifle, Colorado, 200 to 500 colonies.

Frank Willmert, Elmore, Minn.

Ben Metzler, R. No. 1, Jeromesville, O.

A. J. Diebold, Seneca, Ills., 25.

The Youth's Companion Calendar for 1916

The Publishers of *The Youth's Companion* will, as always at this season, present to every subscriber whose subscription is paid for 1916, a Calendar for the new year. It is a gem of calendar-making. The decorative mounting is rich, but the main purpose has been to produce a calendar that is useful, and that purpose has been achieved.

Free Until 1916

Have you subscribed yet for *The Youth's Companion* for 1916? Now is the time to do it, if you are not already a subscriber, for you will get all the issues for the remaining weeks of 1915 free from the time your subscription with \$2.00 is received.

The fifty-two issues of 1916 will be crowded with good reading for young and old. Reading

that is entertaining, but not "wishy-washy." Reading that leaves you, when you lay the paper down, better informed, with keener aspirations with a broader outlook on life. The Companion is a good paper to tie to if you have a growing family—and for general reading as Justice Brewer once said, no other is necessary.

If you wish to know more of the brilliant list of contributors, from our ex-Presidents down, who will write for the new volume in 1916, and if you wish to know something of the new stories for 1916, let us send you free the Forecast for 1916.

Every new subscriber who sends \$2.00 for 1916 will receive, in addition to this year's free issues, The Companion Calendar for 1916.

THE YOUTH'S COMPANION

Boston, Mass.

New subscriptions received at this office.

CHAS. ISRAEL BROS. CO.

486 Canal St., New York

COMMISSION MERCHANTS

Dealers in Honey, Beeswax, etc.

We get you the Best Market Price for your Produce. Write us for further Particulars.

Los Angeles Honey Co.

633 Central Bldg., Los Angeles, Calif.

Buyers and Sellers

OF

HONEY AND WAX

Write us for prices when you are in the market

TRY OUR
HONEY
THAT IS **HONEY**
HERBERT R. FOWLER
94 CAMP ST., NEW BRITAIN CONN.

Above Sticker No. 20 with your name and address, 30 cts per M. Those are very effective. Address as above.

OUR NEW HONEY ADVERTISER

OR

EAT HONEY STICKER

These Stickers Are for Local Advertising



We print your name in them at the following postpaid prices,—

1,000, 60c.; 2,000, 90c.; 3,000, \$1.20
5,000, \$1.80; 10,000, \$3.50; 25,000, \$7.50.

Address all orders to

EASTERN LABEL COMPANY
Clintonville, Connecticut.

Send for Honey Label Catalogue No. 26

Honey and Queens

\$16.00 Gets 32 Gallon Barrel Chincappi Honey.

\$20.00 Same amount either Poplar or Black Tupelo Gum Honey.

\$19.20 Gets Carrier of 8 24 lb Cases Fancy 12½ oz. and Better Light Amber Comb Honey.

\$18.00 Same Amount and Quality 11 oz. sections.

\$16.50 Same Amount 10 oz. Lighter Weight 10c lb.

\$ 5.00 Tested Grey Caucasian Queens, Best Stock \$1.50 each.

J. J. WILDER, Cordele, Ga.

THE BOOSTER

In its current and coming numbers will discuss the following policies, which constitute its platform of principles.

FIRST:—Uniform quality of product, honestly graded and attractively displayed.

SECOND:—A system of distribution that will protect the local producer, and prevent flooding one district and leaving others bare.

THIRD:—A system of crop reports that will give accurate, detailed, and trustworthy information as to crop conditions in all sections promptly and intelligently.

FOURTH:—An efficient method of presenting facts and reasons for the wider use of honey in cooking, in the arts, manufacturers, and on table, to the people who would use it if they knew.

FIFTH:—An association of beekeepers who will carry these things forward to a successful consummation.

Are you interested in these policies? Wrap a quarter in paper and send it AT OUR RISK, and get these valuable numbers, and the rest of the good things for the coming year.

Address THE BOOSTER, Redkey, Ind.

Review Subscribers Having Honey For Sale

We are herewith submitting a list of subscribers having honey for sale. This list includes those only who have more honey than their home market will consume. The subscriber's name and address is under the kind of honey each has for sale and the letter "C" following the address indicates they have comb-honey for sale and the letter "E" extracted, both letters indicating the subscriber has both combe and extracted honey for sale. This list is published free to paid-in-advance subscribers to the Review. Those not on the list should write this office not later than the 15th of the preceding month to get listed. As soon as a subscriber is sold out he is requested to report, as we desire to keep the list a "live one."

SPANISH NEEDLE

J. VanWyngarden, R. No. 4, Hebron, Ind., E.

HORSEMINT

W. C. Collier, Galoid, Texas E.

BULK COMB; ALFALFA

W. J. Stahmann, Clint, Texas.

SWEET CLOVER

J. P. Moore, Morgan, Ky., E.
A. J. Diebold, Seneca, Ills., E.

AMBER

C. E. Woodhull, Kinde, Mich.
S. E. Miller, Rhineland, Mo., E.
M. W. Harrington, Williamsburg, Iowa E.
J. M. Cutts, R.F.D. No. 1, Montgomery, Ala.E.
Fred Briggs, R. No. 2, New Sharon, Iowa, E.
Peter Schaffhauser, Havelock, N. C., E.
Nelson Overbaugh, Frankfort, Kansas, C. & E.
Vollmer & Demuth, Akron, N. Y., E.

ALFALFA

M. D. Phillippe, Elgentro, Calif., E.
W. J. Strahmann, Clint, Texas, E.
J. R. Marlow, Rt. 1, Weiser, Idaho, C. & E.
Idaho-Oregon Honey Producers' Ass'n.
P. S. Farrell, Sec., New Plymouth, Idaho, E.
E. S. Miller, 508 College Ave., Valparaiso, Ind., E.

WHITE CLOVER

Frank Murray, Chase, Michigan C & E.
D. R. Townsend, Northstar, Michigan E.

A. H. Fralick, Homer, Mich. E.
E. B. Rosa, Monroe, Wis. E.
E. A. Doney, Dixon, Iowa, E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
C. H. Burrows, Oran, N. Y., E.
G. Dahlen, Marmony, Minn. E.
O. L. Safford, R. No. 2, Fort Edward, N. Y., C.
A. S. Tedman, Weston, Michigan, E.
Mrs. Floella Douglas, Osseo, Wis., C.
Howard Honey Co., Tyre, Michigan, E.
Ed Swenson, Spring Valley, Minn., E.
Geo. Dodds, Cambridge, N. Y., E.
O. H. Townsend, Merritt, Michigan, E.
N. L. Stevens, Venice Center, N. Y., E.
E. D. Townsend, Northstar, Michigan, E.
Mrs. J. Hettel, Marine, Ills., E.
John G. Wagner, Elkader, Iowa, E.
David Running, Fillion, Michigan, E.
T. S. McLachlin, Whitehall, N. Y., C.
W. D. Wright, Altamont, N. Y., E.
J. C. Stocks, 328 Park St., Grinnell, Iowa. E.
Theo. Gentz, Shawano, Wisconsin. E.
W. S. Pangburn, Center Junction, Iowa-C&E
C. E. Woodhull, Kinde, Mich.

CLOVER AND BASSWOOD BLEND

Dr. C G Luft & Son, Fremont, Ohio., E.
N. L. Stevens, Venice Center, N. Y., E.
F. W. Lesser, Rt. 3, East Syracuse, N. Y. E.
F. E. Matzke, Juda, Wisconsin. E.
W. D. Wright, Altamont, N. Y., E.
Harry W. Beaver, Troy, Pa., E.

BUCKWHEAT

Harry W. Beaver, Troy, Pa., E.
Ira D. Bartlett, East Jordan, Michigan, E.
E. A. Duax, Chippewa Falls, Wisconsin. E.
N. L. Stevens, Venice Center, N. Y., E.
W. D. Wright, Altamont, N. Y., E.
O. L. Safford, R. No. 2, Fort Edward, N. Y., C.
L. Lloyd, R. No. 1, Caywood, N. Y., E.
Vollmer & Demuth, Akron, N. Y., E.

GOLDEN ITALIAN QUEENS

Mr. Beekeeper, do you want the best queens that money can buy? If so try this strain of Goldens that for fifteen years has been a leader. All queens reared from superior Golden mothers and mated with select Golden drones; are large, vigorous and prolific; the bees gentle and hustlers, and are noted throughout the United States as a disease-resisting strain. Mated from strong nuclei, three to five full Langstroth frames. Safe arrival (U. S. and Can.) purity of mating and satisfaction guaranteed. Write for descriptive circular.

PRICES OF QUEENS

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
Untested....	\$1.50	\$ 7.50	\$13.50	\$1.25	\$ 6.50	\$11.50	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Tested.....	2.00	8.50	15.00	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Sel. Tested..	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Untested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	11.00	18.00

Breeders \$5.00 to \$25.00

BEN G. DAVIS, Spring Hill, Tennessee

WE GUARANTEE EVERY QUALITY HILL QUEEN TO GIVE SATISFACTION. ANY QUEEN NOT ACCEPTABLE FOR ANY REASON WHATSOEVER WILL BE REPLACED IF RETURNED.

QUALITY-HILL-QUEENS

"The kind you'll eventually buy"

Reared under ideal conditions, bred for business from a strain which has been a leader for half a century and hardened to northern winters, **Quality Hill Queens** are better than most. They are strong vigorous and fairly gentle.

Every cell is started in a 10-frame colony and built in a full colony with a laying queen and brimful of young bees. Mated in 4-frame nuclei, no baby nuclei being used, and no cells being caged. Especially resistant to European foulbrood.

Orders filled in rotation until we catch up. Discount of 10 per cent on all cash orders for 12 or more queens received before May 1. Write for circular and prices on pound packages. References: A. I. Root Company, G. B. Lewis Company or Plainfield, Illinois State Bank.

	Oct. 1 to July 1			July 1 to Oct. 1		
	1	6	12	1	6	12
Untested	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Select Untested	1.25	6.50	12.00	1.00	5.00	9.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00
Select Tested	2.50	13.50	25.00	2.00	11.00	18.00

Prices of Breeders on Application

KENNITH HAWKINS, PLAINFIELD, ILLINOIS

DAUGHTERS OF AN E. D. TOWNSEND QUEEN WHICH STORED FIVE TIMES THE AVERAGE OF 1100 COLONIES LAST YEAR, MATED TO OUR LINE BRED DRONES, IF YOU WISH.

The Pearce Method of Beekeeping

Adopted at the Michigan State Prison with J. A. Pearce as Manager
You will be pleased to learn that I am in charge of the Michigan State bees at the Jackson Prison. The State farms comprise about 3,000 acres. It is intended to keep a 1000 or more colonies of bees. We have at present 130 colonies in our double 8 frame hives. They will be moved into their permanent houses about October first where they will stand indefinitely winter and summer as the **PEARCE METHOD** has been adopted by the management. Anyone wishing to know what this method is should send 50 cents to J. A. Pearce, Rural No. 1, Grand Rapids, Mich. for "The Pearce Method of Beekeeping" or \$1.10 to the Beekeepers' Review for the Review one year and the book.

J. A. PEARCE.

How Would This Combination Suit You?

The Beekeepers' Review 15 months beginning with the October Number	\$1.25
The Youth's Companion for 1916, the balance of 1915 free, and The Companion Home Calendar, free.....	2.00
McCall's Magazine, one year.....	.50
One McCall Dress Pattern .....	.15
Regular price for all	\$3.90

All for Only

\$2.45

Address with remittance

THE BEEKEEPERS' REVIEW, Northstar, Michigan

The Canadian Horticulturist and Beekeeper

The Only Bee Publication in Canada

It is the official organ of the Ontario Beekeepers' Association and has incorporated with it the former Canadian Bee Journal.

Beekeeping and Horticulture in its various branches are effectively combined to form a live attractive and practical monthly magazine.

Well illustrated and up-to-date. Subscription price postpaid—

Canada—\$1.00 a year.

United States—\$1.25 a year.

Foreign—\$1.50 a year.

Sample Copy sent free on request.

The Horticultural Publishing Co., Limited

Petersboro, Ont., Can.

"falcon" BEE SUPPLIES

SHIPPING CASES, EXTRACTORS, HIVES, ETC., EVERYTHING FOR THE BEEKEEPER

Send us a list of your requirements for next season and let us quote you our very best factory prices.

"Falcon supplies are made with the greatest care and we feel confident that you will be well pleased with them.

Send for our Red catalog, which will be sent postpaid.

All goods guaranteed. A trial will convince you.

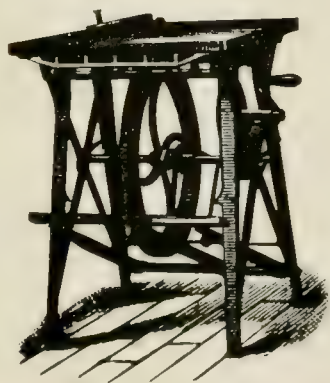
W. T. FALCONER MFG. CO., Falconer N. Y.

Where the Good Beehives Come From

W. H. LAWS' ITALIAN QUEENS

There are no better bees than Laws' Italians. Twenty-seven years careful breeding. My bees have taken premiums in my own and others' hands in many of the states of the Union. A single firm having bought over 6000 queens from me in past seven years say, "Your queens are very satisfactory." A queen-breeder who is using my breeding-queens says he could well afford to have paid \$25.00 each for such queens ten years ago. Untested queens, 90c; 12 for \$9.00; 100 for \$70.00. Tested queens, \$1.00; 12 for \$10.00; 100 for \$85.00. Select tested, \$2.00; 12 for \$18.00; 50 for \$50.00. Breeding queens, a large number of as fine queens, tried and tested, as breeders, each, \$5.00; six for \$25.00. Prompt attention to all correspondence.

W. H. LAWS, BEEVILLE, BEE COUNTY, TEXAS



MAKE YOUR OWN HIVES

Beekeepers will save money using our Foot Power

SAWS

in making their hives, sections and boxes. Machine on trial. SEND FOR OUR CATALOGUE

W. F. & JNO. BARNES CO.

84 RUBY STREET

ROCKFORD, ILLINOIS

TRADE

The REVIEW is now buying all kinds of beekeepers' supplies for the subscribers. We get wholesale prices on all supplies, returning nearly all the difference between the list price and wholesale price to the subscriber ordering. It is the desire of the REVIEW to make only enough out of the supplies bought for the subscriber to pay postage and the cost of advertising. This scheme is so liberal that ALL ought to take advantage of this buying privilege.

Never before in the history of beekeeping have the masses had the privilege of buying their supplies at near wholesale prices, and a person is very short sighted to pay the LONG CATALOG PRICE for his supplies when this privilege of buying at the lower price is open.

Have you got into such a "rut," that you MUST order your goods through the OLD HIGH PRICED channel or are you progressive enough to break away from the "Ties that bind" and come over into the new and better way of buying, i. e. that of buying collectively. Some one has said that it would "take one hundred years to educate the people to the importance of buying collectively.", About ten percent of beekeepers are NOW educated up to this standard and are taking advantage of this grand privilege, and this appeal is to the other ninety per cent who seem not to be able to comprehend that there is a possibility to make their dollars go further than through the OLD, OUT OF DATE way of buying individually.

The dealers will "tickle" when they hear you say, "I'm from Missouri, I have to be shown" for they know the one uttering these sentences is so far behind the times that he will live in the "old rut," to the benefit of the dealer and finally drop out, without ever receiving a single benefit from cooperation. DO NOT BE THE ONE TO STAND BACK TO BE SHOWN, but come to the front and be one that will say "We will show them," and take the word of your old friend Townsend, that we will win, AND IN LESS THAN A HUNDRED YEARS, too.

We hope to add another 10 per cent to the already well pleased 10 per cent that are now buying through the REVIEW, before the end of the year, will you be one of them to save a few dollars by this collective buying!

It would be a "cold day" when Roderick Cameron, Shabbona, Michigan, would buy his supplies otherwise than through the Review, for there is a reason, listen:—On August 13th, he placed an order with the Review for \$30.00 paying 12½ per cent of it with two rebate checks he had received from previous orders. He will get a nice rebate check on this last order, so you see we will have an "endless chain," so to speak, with him (and others too) for you see he could not afford to buy through other sources, where no rebate check would be forth-coming.

Virgil Weaver, Falmouth, Ky. bought 100 cases of 5 lb friction top pails, 12 in a re-shipping case for which we quoted him a special price of \$55.00 per hundred. After making him this unheard of low price, he received back a rebate check of \$3.00 when we mailed him his bill. Do you remember what you had to pay for tin containers before the advent of the National and now the Review has taken hold of this proposition for the producer! Don't you begin to see the possibilities of buying collectively? The Review is now no doubt the largest distributor of Tin Containers for Honey in the world. Is it any wonder than when we ask manufacturers (we buy direct of the manufacturer) for their price on tin containers, that they "take notice" for they know that their answer may make or lose many thousands of dollars in trade. Patronize the bridge that carries you across safely. No matter what any one quotes you for your supply business, we can likely do as well, or better. At any rate you will be used very well.

We could go on and fill this number of the REVIEW with similar instances of well pleased REVIEW customers who have saved all the way from a dollar to \$30.00 on single deals they have bought through the REVIEW, but space forbids mentioning others at this time. You may think you are getting a very close price through the dealer you have been buying of along back, but all we ask is for you to send us the same money you have been paying in the past, you saying of whom you bought, we will take the money and buy at the very closest price possible, returning you the difference, if any. Do not write asking for prices, as we have none, but just make out your order as usual, inclosing the usual amount of exchange, say whose goods you want and we will do the rest.

A trial order will convince you. Hereafter, address all orders for beekeepers' supplies of every sort to

THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN

QUEENS OF QUALITY

The Editor of *The Beekeepers' Review* and his sons have 1100 colonies of bees worked for extracted honey. With all those bees working with equal advantage, all having the same care and attention, they have an opportunity unexcelled to ascertain without a reasonable doubt, colonies desirable as breeders from a honey producer's standpoint. Likely, never in the history of beekeeping, were there a better opportunity to test out the honey getting strain of bees than this. Think of it, 1100 colonies with equal show, and a dozen of those colonies storing 250 to 275 pounds of surplus honey this last poor (with us) season, while the average of the entire 1100 being not more than 40 pounds per colony. We have sent two of our very best breeding queens (their colonies producing 275 pounds surplus each, during the season of 1915) to John M. Davis, and two to Ben G. Davis, both of Spring Hill, Tenn. and they will breed queens for the Review during the season of 1916, from those four superior honey gathering breeding queens. Those young queens will be mated with their thoroughbred drones. Our stock is of the three banded strain of Italian, also that of John M. Davis, while Ben G. Davis breeds that disease resisting strain of Goldens, that is becoming so popular.

By this time you are likely thinking that your strain of bees may be improved some by the addition of this superior strain of Review queens and how you can secure one or more of those superior honey gathering queens as a breeder: We will tell you: They will be sold to none except Review subscribers. If you are a paid-in-advance subscriber to the Review for 1916, we will mail you one of the daughters of those favorite queens in June for a dollar. If not a subscriber to the Review for 1916, send \$1.75 for a year's subscription to the Review and one of those famous young queens. Those queens are well worth two dollars each, compared to the price usually charged for ordinary queens, but we are not trying to make money out of this proposition, only we are anxious to have every reader continue during 1916 a subscriber of the Review and we are taking this way to accomplish the object. A few of the very first orders for queens that we receive can be mailed in May, but the majority will not be mailed until June. Orders filled in rotation. Have your order booked early and avoid disappointment.

Address with remittance

The BEEKEEPERS' REVIEW, Northstar, Michigan

ROUND SCREW CAP HONEY JARS

We have just made arrangements with the Federal Glass Co., Columbus, Ohio so we can furnish National members and subscribers with a first class screw cap honey jar. The jars, and especially the screw caps are well made. The jars are of clear white Flint glass and the caps are Lacquered, not the cheap tin caps usually sold on such jars. As our "without profit" selling price is so low, one is inclined to think the goods may not be up to standard, but we assure our member-subscriber that there is none better to be had at any price than the jars listed below.

The following sizes are approximately the amount each will hold of ordinary honey, and may vary an ounce one way or the other.

15 oz. Tall Honey Jar, 2 doz. in a paper re-shipping case per gross.....	\$3.25
1 $\frac{1}{4}$ lbs. Tall Honey Jar, 2 doz. in a paper re-shipping case, per gross.....	3.50
1 $\frac{1}{2}$ lbs. Tall Honey Jar, 2 doz. in a paper re-shipping case, per gross.....	3.75
1 $\frac{3}{4}$ lbs. Tall Honey Jar, 2 doz. in a paper re-shipping case, per gross.....	4.00
2 $\frac{1}{4}$ lbs. Tall Honey Jar, 1 doz. in a paper re-shipping case, per gross.....	4 35
5 oz. Regular Tall Honey Jar, 2 doz. in a paper re-shipping case, per gross.....	3.00

The manufacturers do not care to accept orders for less than a gross of a kind. Kindly bear this in mind when ordering and address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

Beekeeping

Dr. E. F. Phillips' new book *Beekeeping*; edited by L. H. Bailey is the latest out. It contains 457 pages divided into 24 chapters with Appendix and is illustrated with 190 engravings. While the author says the book is not intended as a text book, still it covers nearly the whole ground of beekeeping, and much of it from a scientific standpoint. The fact that it is the production of our Dr. Phillips of the Department of Agriculture, Washington, D. C. is guarantee enough that the book is authentic, so one need not hesitate about reading it with the expectation of being well paid for the time spent in doing so. It is published by The MacMillan Co., New York, price \$2.00, postage extra. It can be had through the Review office at the above price.

We have made arrangements with the publishers so we can club "Beekeeping" with the Review a year, both for only \$2.25 but to get this very close price postage must be included on two pounds from New York City. Your postmaster can tell you the parcel post rate to New York on 2 lbs. Address with remittance,

The BEEKEEPERS' REVIEW, Northstar, Michigan

Tumbler Shaped Jellies

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them

Six oz. Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz.....	\$4 50
Gross in 2 doz. paper reshipping case.....	2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs. honey, Bbl. of 21 doz.....	3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at.....	2 75
Four and one-half oz. plain Tumblers hold 7 ozs. honey, in 2 doz. re-shipping case, per gross	2 50

Prices are f. o. b. Columbus, Ohio.

Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

Something Special in Friction Top Cans and Pails

We have made arrangements with an Independent Can Company in Chicago where we can offer some very attractive prices on standard plain friction top pails and cans in original crates as follows:

2 pound Friction Top Cans, 612 in a crate, weight per crate 190 pounds.
2½ pound Friction Top Cans, 450 in a crate, weight per crate 165 pounds.
5 pound Friction Top Pails, 203 in a crate, weight per crate 165 pounds.
10 pound Friction Top Pails, 113 in a crate, weight per crate 145 pounds.

We will be pleased to quote prices on 1 to 4 crates, inclusive.
We will be pleased to quote prices on 5 to 9 crates inclusive.
We will be pleased to quote prices on 10 or more crates.
We will be pleased to quote prices in car lots, or more.

The minimum 36 foot car freight rate west of the Mississippi is 16,000 pounds, but it is doubtful whether we could get more than approximately, 14,000 pounds of friction top pails in a car. With this information it will be easy for all to ascertain the freight rate, either in car lots or local shipments, to your depot, by consulting your freight agent.

Remember we are headquarters for anything in the line of Tin containers for beekeepers. For further particulars write

The BEEKEEPERS' REVIEW, Northstar, Michigan

Parcel Post Mailing Cases and Cans for Mailing Honey

They are square syrup cans with 1¾ in. screw caps, except the quart which has a 1½ in. cap. The mailing cases are of heavy corrugated paper, built double, and fulfill all the requirements of the postal regulations. Our case requires no glue or pasting, just telescope the case together after putting in the can of honey, wrap with a heavy cord and it is ready for mailing. Out of thousands in use, not a single complaint of breakage in the mails has been reported. Our case is being used by the U. S. Government, they just now placing their third order. Notice that the price is now some less than formerly.

1 gallon can, including mailing case, per crate of 50.....	\$5.50
½ gallon can, including mailing case, per crate of 100.....	8.00
¼ gallon can, including mailing case, per crate of 100.....	6.00

We cannot furnish less than a full crate of the above at any price.

Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

Gallon and Half-Gallon Glass Containers for Honey

Of all the containers for honey we have seen, this gallon jug with bail is best. Fill it with rich, ripe, roapy, delicious white honey, and watch your prospective customer's "mouth water" as he beholds the most gracious sweet ever "tickled the palate" of mortal man glistening in its purity, for can't he see it (!) The glass is of pure white flint, consequently, does not obstruct the vision and it is a vision, too, to the would-be customer. But you must see it when filled with honey to appreciate its attractiveness. We have made arrangements to furnish these flint glass jugs with bails f. o. b. Alton, Ill. as follows:

3 Dozen 1 gallon, per crate.....	\$4.75
6 Dozen ½ gallons, per crate.....	7.00
½ Dozen 1 gallons in reshipping case, per case.....	.80
1 Dozen ½ gallons in reshipping case, per case.....	1.00

The two quotations above are for containers each packed singly in double corrugate paper, so single jugs when filled with honey can be shipped singly without other packing. The last two quotations are for retail trade at home, or where a shipment is made of a half dozen or dozen, according to the size of the jugs ordered. They are wide mouth and have American metal screw caps.

Address all orders with remittance

The BEEKEEPERS' REVIEW, Northstar, Michigan

Tumbler Shaped Jellies

In offering the two following jellies we wish to state that we have selected two very pretty designs, rather plain with a little octagon at the bottom. Think you will be pleased with them

Six oz Tumbler shaped Jellies, hold 8-9 ozs. honey, barrel of 27 doz.....	\$4 50
Gross in 2 doz. paper reshipping case.....	2 50
Eight oz. Tumbler shaped Jellies, hold 11-12 ozs. honey. Bbl. of 21 doz.....	3 75
Eight oz. as above in 2 doz. paper reshipping case, gross at.....	2 75

Prices are f. o. b. Columbus, Ohio.
Address all orders to

The BEEKEEPERS' REVIEW, Northstar, Michigan

THE BEEKEEPERS' REVIEW CLUBBING OFFER

The REVIEW for 1916.....	\$1.00	} <i>All Four For Only</i> \$3.00
October, November and December 1915 free		
American Bee Journal for 1916.....	1.00	
Gleanings for 1916.....	1.00	
One REVIEW HONEY QUEEN	1.00	
Total	\$4.00	
For description of REVIEW QUEEN see another column.		

Address with remittance The BEEKEEPERS' REVIEW, Northstar, Michigan

Golden and Three Banded Italian Queens For Sale

The Review has made arrangements with the following queen breeders to furnish Review subscribers with queens at their price, listed in other part of this number of the Review. It will be noticed that the list is of the most reliable breeders we have at the present time, and we take pleasure in offering their stock as the very best obtainable at any price, not excepting imported stock. We have spoken for a goodly number of those fine queens, so can promise our readers very prompt delivery at the present time.

The Mr. John M. Davis strain of three banded Italians needs no introduction at this time, his 43 years experience as a breeder for the market has placed his fine stock far above the average, and the beauty of it is, he promised to ship all queens almost by return mail. Order through The Review to be sure of this very prompt service. The price we sell at is given in his advertisement on another page.

Mr. J. P. Moore strain of three banded queens is world renowned for gentleness, hardiness and good honey gathering characteristics. Mr. Hutchinson used to say there was **none better to be had**. Mr. Moore has promised us that he would mail queens by return mail to Review subscribers. An order through the Review would insure prompt delivery.

Mr. Ben G. Davis, breeder of the "Davis" famous "Goldens." Mr. Davis in his strain of goldens has combined honey gathering qualities with beauty and gentleness. There has more favorable comment reached the Review office regarding "Ben's" goldens, as disease resisters than any other breeders. This means that they are a hardy and industrious strain. Ex-Director Buchanan says "they are the best disease resisters I ever saw." Mr. Buchanan was State inspector of apiaries of Tennessee for several years and ought to know. Mr. N. E. Frances says "They are wonderful disease resisting bees." If you are in an European foul brood location, it would look as if this strain would be the one to select as "good housekeepers" to fight this disease with. Mr. Davis has promised to mail Review orders promptly, by return mail.

In requeening this Fall, mail all orders to THE REVIEW, Northstar, Michigan.

Our 1915 Crop of White Clover Extracted Honey For Sale

TOWNSEND'S ULTRA-QUALITY

Gathered from the clean meadows of old Gratiot County, where hardly a single other blossom can be found, except the White and Alsike clover, we can this year offer Clover Extracted Honey in its purity. In the production of this crop of honey, we offer you our forty years' experience in learning how to produce the **very best quality of honey from the very best honey nectar producing plant in the world**, White and Alsike clover. Combs are provided, so no honey is extracted until it is thoroughly cured on the hive, by the bees. Besides this, our honey is produced in **nice clean white combs**, above queen excluders. Last Fall, these white combs were cleaned of all honey adhering to them, by the bees, lest there should be some little old sour honey from last year mixed with this new crop to impair its flavor. Rich, ripe, roapy, are some of the "pet names" given our honey by the consuming public. Of course, this Clover honey, handled as we do, would naturally be of a most delicious flavor, aroma, bouquet. As usual, this 1915 crop of Ultra-quality white clover extracted honey will be canned in brand new, bright, shiny, tin cans, containing 60lb net weight, and crated one and two in a case for shipment, the bulk being crated, two in a crate. It costs some more to produce Townsend's Ultra-quality honey, than the ordinary extracted honey upon the market, then as it is evaporated down so close and heavy body, we do not get so many pounds by this process, consequently have to sell it for a little advance over regular stock. We quote you this fine stock as long as it lasts F. O. B. our station as follows: one 60lb net can cased singly of this best stock at \$6.00 per can; in cases of two cans, one to nine cases inclusive, at 9 cents per pound; 10 or more cases at 8½ cents per pound. Sample free.

Our binding guarantee is that if Townsend's Ultra-Quality extracted honey is not as good honey as you ever bought at any price, or, if for any reason you do not care to accept it upon arrival we will gladly take it off your hands and refund your money, including all freight charges. Could we offer more! Of course you will realize we could not make this offer if our stock of honey was "just ordinary" but Townsend's Ultra-quality extracted honey is not of the ordinary kind, so we do not fear the results of this binding guarantee. Remember there is but one Townsend's Ultra-Quality extracted honey and to secure this splendid brand address

E. D. TOWNSEND & SONS, Northstar, Michigan, U. S. A.

NOTICE TO QUEEN BREEDERS

If you want to sell Queens and Bees, advertise in the AMERICAN BEE JOURNAL. Read what some of our advertisers have to say about the pulling power of our advertising pages:

Got good results from the advertisement I ran in last season's Journals.

D. G. LITTLE, Hartley, Iowa.

We have advertised in the American Bee Journal for thirty years. Have always found it a good advertising medium.

J. W. K. SHAW CO., Loreauville, La.

My advertisement brought all the Orders I wished for. In fact, more than I was able to supply. Quite a number of orders had to be returned.

J. A. SIMMONS, Sabinal, Texas.

The American Bee Journal is a good medium for advertisements. We have had all the Orders booked we could fill.

GOLDEN RULE BEE CO., Rialto, Calif.

The Reasons are self evident—a good bee paper is taken by live and wide awake beekeepers and these are the kind that are always in the market for good bees and good queens.

Rates on space are not high. Display at 15 cents a line or \$2.10 per inch. Classified 15 cents a line.

Send in your order with copy today and get rid of your surplus queens.

AMERICAN BEE JOURNAL
HAMILTON, ILLINOIS

TENNESSEE-BRED QUEENS

43 Years Experience in Queen Rearing--Breed 3-Band Italians Only

	Nov. 1 to May 1			May 1 to June 1			June 1 to July 1			July 1 to Nov. 1		
	1	6	12	1	6	12	1	6	12	1	6	12
Untested.....	\$1.50	\$ 7.50	\$13.50	\$1.25	\$ 6.50	\$11.50	\$1.00	\$ 5.00	\$ 9.00	\$.75	\$ 4.00	\$ 7.50
Sel. untested	2.00	8.50	13.50	1.50	7.50	13.50	1.25	6.50	12.00	1.00	5.00	9.00
Tested.....	2.50	13.50	25.00	2.00	10.50	18.50	1.75	9.00	17.00	1.50	8.00	15.00
Sel. Tested	3.00	16.50	30.00	2.75	15.00	27.00	2.50	13.50	25.00	2.00	10.00	18.00

Bees by the pound, 1 lb., \$1.25; 2 lb., \$2.25; 3 lb., \$2.75, July August and September.
Nuclei (no queen) 1 fr. \$1.50; 2 fr. \$2.15; 3 fr. \$2.75; 4 fr. \$3.50; pure 3-band Italians.
Select queen wanted, add price.

Capacity of yard, 5000 queens a year--Select queen tested for breeding \$5.00
The very best queen tested for breeding \$10.

Queens for export will be carefully packed in long distance cages, but safe delivery is not guaranteed.

My father bought queens from you over thirty years ago. They were good ones.

S. D. House, Camilus, N. Y., June 12, 1912.

I have some fifty of your queens that you sold to F. Farr last season, and for beauty, hardiness and good honey gathering qualities, they are second to none among our 1,200 colonies.

M. A. Gill, Longmont, Colo., July 7th, 1903.

Six years ago I got six queens from you; they were the finest I ever saw. The six colonies averaged 185 pounds of comb honey

James I. Davis, Lincoln, Neb., May 24, 1909.

I have one of your queens first year making me seven finished cases; second year, five cases, and this year, two cases at time of supercedure, July 10.

H. G. Henthorne, Plattsville, Col., July 16, 1907.

JOHN M. DAVIS, Spring Hill, Tenn.



10 Great Serials

full of life and action, filled with the fire of fine inspiration and followed by 250 short stories of adventure, will make

The YOUTH'S COMPANION

The Companion will crowd 1916 with the very best for all ages. Twice the amount of reading given in any monthly magazine.

Boys

Everything in it interests the boy. The Boys' Page, the splendid live adventure Serials and Short Stories, sports, games, things to make with tools, and every phase of outdoor and indoor life.

Girls

Special Stories for her own delight. The Girls' Page, suggestions for making "pin money," receipts, hints on everything that makes girl-life glad, from conduct to crochet work and candy making.

Fathers

The strong Editorial Page with its valuable comment on the important questions of the day, the Nature and Science column, and original humor. The rare stories catch him also.

Mothers

Read it all, from Family Page to the Doctor's Corner. The home helps and suggestions, the stories, the Children's Page to read to the little ones, Companion Receipts, and all are hers.

Nine Great Serials, 250 Short Stories, Articles by Famous Men and Women, 1000 Catches of Humor, Suggestions on Care of the Home, Magagement, etc.

Send for Sample Copies of the Paper and "Forecast for 1916"

If You Subscribe Now, sending \$2.00, you will receive the nine November and December issues of 1915 — then the 52 issues of 1916 and The Companion Home Calendar.

THE YOUTH'S COMPANION. BOSTON, MASSACHUSETTS

The club—The REVIEW 15 months beginning with the October, 1915 number, with the Companion 14 months, beginning with the November, 1915 numbers, both for only \$2.25.

To get this special bargain, all order must be sent direct to
The BEEKEEPERS' REVIEW, Northstar, Michigan

MAGAZINES AT HALF PRICE

Every Woman Will Want This Trio



EXCEPTIONAL BARGAIN OFFER

Mother's Magazine,	One Year	\$1.50	{	All Three For
Ladies' World	One Year	1.00		
McCall's Magazine (with free pattern)	One Year	.50		
Total Value.....		\$3.00		
				\$1.50

Mother's Magazine

A magazine of service, whose editorial policy is the result of scientific study of the needs of its subscribers. Its special articles and practical departments constitute an invaluable reference library for the great home-builder — the Mother. Over half million circulation built upon forty year's successful experience in dealing with the most intimate home and personal problems.

Ladies' World

The favorite household magazine in over a million homes. The value of its Pure Food Department, conducted by Professor Lewis B. Allyn, is immeasurable. Also specially noted for its absorbingly interesting Fiction. Forty Big Features monthly give it the unique distinction of being the only high-class dollar magazine of general interest in the entire woman's field.

McCall's Magazine

84 to 136 pages monthly---50c year
A recognized Fashion Authority for 45 years, with more subscribers than any other fashion magazine. Fifty exclusive designs monthly, showing latest McCall Patterns, whose style, fit, simplicity and economy make them first choice of thousands of well-dressed women. More than 1,200,000 families love McCALL'S for it's wholesome stories, sympathetic articles, newest ideas in Fancy Needlework, Home Dressmaking Lessons, Betty Lyle Wilson's own special Receipts, and the many other interesting and helpful departments including Housekeeping Exchange. "I cannot tell you all that it means to me," writes a South Carolina subscriber. "The second copy saved me more than enough to pay for a year's subscription," writes a Texas friend.

Mothers' Magazine	One Year	\$1.50	} All Four For	2 ^{<u>.00</u>}
Ladies' World	One Year	1.00		
McCall's Magazine	One Year	.50		
(With Free Pattern)				
The Beekeepers' Review	One Year	1.00		
Total Value	One Year	<u>\$4.00</u>		

To secure this wonderful bargain, address all orders to

The BEEKEEPERS' REVIEW, Northstar, Mich.

Our Special Big Four Magazine Offer!

Woman's World--Plain and Fancy Needlework--Home Life

A special arrangement enables us to offer our subscribers for a limited time only THE BEEKEEPERS' REVIEW for one year with a full year's subscription to all three of the above high-grade publications, at the special price of \$1.25.

THREE BIG MAGAZINES AND BEEKEEPERS' REVIEW all for \$1.25



WOMAN'S WORLD, the most popular magazine in America, reaches over two million homes. Contains fascinating stories by the best writers. Special departments of great interest to those concerned with the home and housekeeping. Latest fashions and patterns each month, with lessons in dressmaking. Music lessons and songs or an instrumental piece in nearly every issue, and many other departments. It's the equal of any dollar magazine.



PLAIN AND FANCY NEEDLEWORK—This is a splendid publication devoted exclusively to Needlework. It contains complete instructions for making all kinds of embroidery, crocheting, lace making and other handicrafts. It gives valuable advice in dressmaking, millinery and household decorations. It is a magazine that should be in every woman's home.



HOME LIFE—A monthly magazine edited and published for clean home entertainment. Every issue is filled with stories and special articles by prominent well-known writers. "A Few Minutes With Father," the editorial page of Home Life is read with great interest in every home. Readers of this publication will enjoy every page.

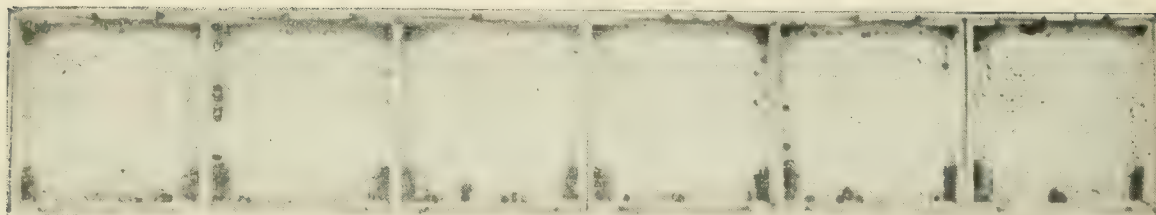
This offer supplies you with Magazines of the Best Quality, giving you a year's supply of good literature at a saving of one-half the cost.

This is the BEST and biggest combination clubbing offer ever presented to the public. The publisher of the REVIEW is glad to announce to his subscribers the completion of this splendid arrangement, whereby he can offer such an excellent list of publications in connection with a year's subscription to the REVIEW at the remarkable price of \$1.25 for all four. This offer is good for a SHORT time only and may be increased at any time.

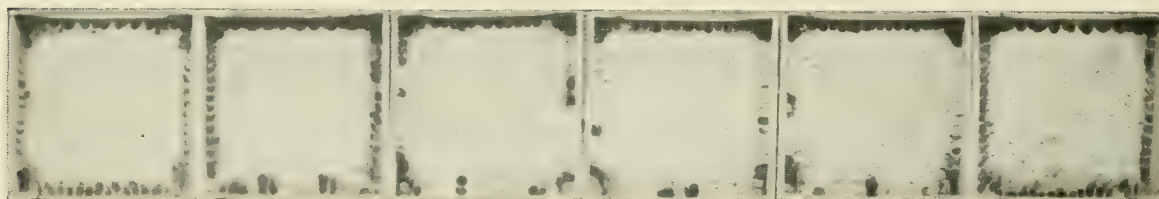
Address all
Orders to

BEEKEEPERS' REVIEW

Northstar,
Michigan



Extra Fancy



Fancy

National Grading Rules

Adopted at Cincinnati, Feb. 13, 1913

Sections of comb-honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these respects that any section shall be representative of the contents of the case.

I. FINISH:

1. **EXTRA FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings, and not more than six unsealed cells on either side.

2. **FANCY**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white and not more than six unsealed cells on either side exclusive of the outside row.

3. **NO. 1**—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells exclusive of the outside row.

4. **NO. 2**—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around and not more than 60 unsealed cells exclusive of the row adjacent to the box.

II. COLOR:

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

III. WEIGHT:

1. **HEAVY**—No section designated as heavy to weigh less than fourteen ounces.

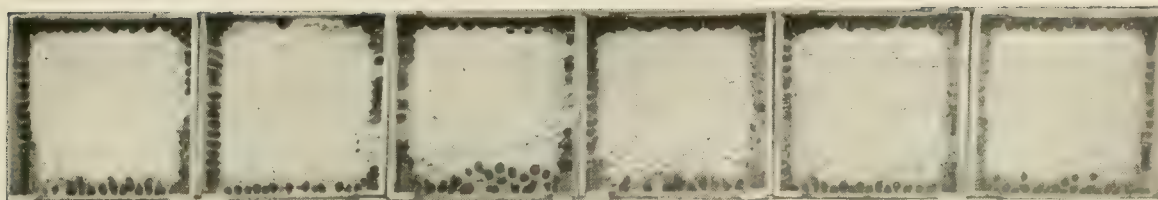
2. **MEDIUM**—No section designated as medium to weigh less than twelve ounces.

3. **LIGHT**—No section designated as light to weigh less than ten ounces.

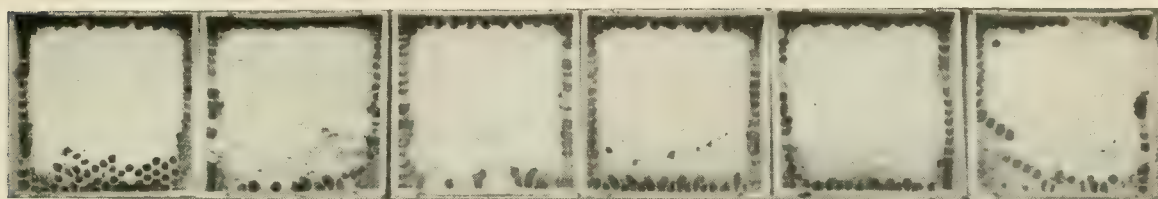
In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, Amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color and weight can be briefly described.

CULL HONEY

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box, leaking, injured or patched up sections; sections weighing less than ten ounces.



Number One



Number Two

Colorado Grading Rules, 1915 Revision

I. COMB-HONEY

FANCY—Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey, comb and cappings white, or slightly off color. Combs not projecting beyond the wood, sections to be well cleaned. No section in this grade to weigh less than 12 1-2 oz. net, or 13 1-2 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 12 1-2 oz." The front section in each case must be uniform color and finish and shall be true representation of the contents of the case.

NUMBER ONE—Sections to be well filled, combs firmly attached, not projecting beyond the wood and entirely capped, except the outside row next to the wood. Honey, comb and cappings from white to light amber color. Sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be uniform color and finish and shall be a true representation of the contents of the case.

NUMBER TWO—This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross. Also of such sections that weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells altogether, which must be filled with honey. Honey, comb and cappings from white to amber in color. Sections to be well cleaned. The top of each section in this grade must be stamped, "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish and shall be a true representation of the contents of the case.

COMB HONEY THAT IS NOT PERMITTED IN SHIPPING GRADES—Honey packed in second hand cases. Honey in badly stained or mildewed sections. Honey showing signs of granulation. Leaking, injured or patched up sections. Sections containing honey dew. Sections with more than 50 uncapped cells, or a less number of empty cells. Sections weighing less than the minimum weight. All such honey should be disposed of in the home market.

II. EXTRACTED HONEY

Must be thoroughly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans, sixty pounds shall be packed in each 5 gallon can and the top of each 5 gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber and amber, the letters "W" "L. A.," "A" should be used in designating color and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new, substantial cases of proper size.

III. STRAINED HONEY

Must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained and if packed in five gallon cans, each can shall contain sixty pounds. The top of each 5 gallon can shall be stamped or labeled "Net weight not less than 60 lbs." Bright, clean cans that previously contained honey may be used for strained honey.

HONEY NOT PERMITTED IN SHIPPING GRADES—Extracted honey packed in second hand cans. Unripe or fermenting honey, weighing less than 12 lbs. per gallon. Honey contaminated by excessive use of smoke. Honey contaminated by honey dew. Honey not properly strained.

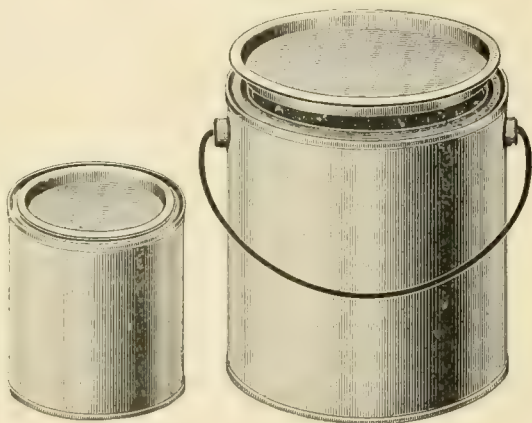
Canco Honey Cans and Pails



PATENTED

Parcel Post Honey Package, oblong can with slotted screw, record seal and rubber gasket. Individual corrugated cartons. 6 lb. and 12 lb. sizes only.

Spencer Friction Top Cans and Pails

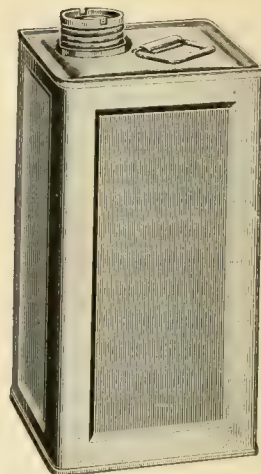


PATENTED

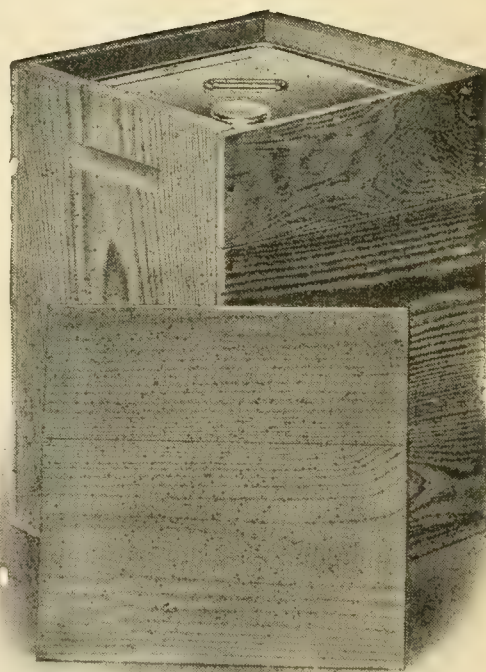
In sizes holding approximately 2 lbs., 2½ lbs., 3 lbs., 5 and 10 lbs.

Write for prices.

PATENTED



1 GALLON SQUARE



60 Pound Square

One and two in case.

American Can Co.

New York Chicago
147 West 14th St. Monroe Bldg.

TIN CONTAINERS FOR HONEY

FRICTION TOP PAILS



the same as all are familiar with at the grocery store, containing corn syrup and other syrups, and is one of the most simple seals on the market, for all one has to do is to fill the pail with honey, crowd down the cover and the fit is so snug that there is no leakage.

Approx Capacity	Per 100 50 lots	Per 100 In 100 lots	Per 100 In 500 lots	Per 1000 In 1000 lots or over
2 lb. Can		\$2.25	\$2.15	\$20.00
2½ lb. Can		2.75	2.60	24.00
3 lb. Can		3.00	2.85	28.00
5 lb. Pail	\$5.00	4.75	4.50	42.50
6 lb. Pail	5.25	5.00	4.75	45.00
10 lb. Pail	7.00	6.50	6.25	60.00
12 lb. Pail	7.25	6.75	6.50	62.50

Above Cans and Pails in wooden re-shipping cases, same as gallon square cans, will cost as follows:

24 cans in a case, 2 lb. Cans	\$0.60 per case
24 cans in a case, 2½ lb. Cans	.71 per case
12 pails in a case, 5 lb. Pails	.65 per case
12 pails in a case, 6 lb. Pails	.70 per case
6 pails in a case, 10 lb. Pails	.49 per case
6 pails in a case, 12 lb. Pails	.55 per case

The above containers are known as "buckets" in some localities.

60-POUND SQUARE CANS 1¾ INCH SCREW

1 in a case, price	\$.33 per case
2 in a case, price	.60 per case
2 in a case in lots of 250 cases, price	\$59.00 per 100 cases
2 in a case in lots of 500 cases, price	58.50 per 100 cases
50 in a crate, price	\$10.50 per crate
Above 60 lb. cans with 8 in. screw, add 11c per case of two cans, and 5c per case when cased singly.	

ONE GALLON SQUARE SYRUP CAN, WITH 1¾ IN. SCREW CAP

6 in a wooden re-shipping case @	.60c per case
10 in a wooden re-shipping case @	.95c per case
50 in one large crate	\$3.63 per crate
½ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	\$5.50
¼ gallon square syrup cans, 1¾ in. screw cap, per crate of 100	4.00

Anything in the line of Tin Containers can be furnished at corresponding prices.

One percent discount to Review Subscribers cash with order. Additional discounts in carload lots which can be made up of an assortment of the different cans and pails if so desired.

Address

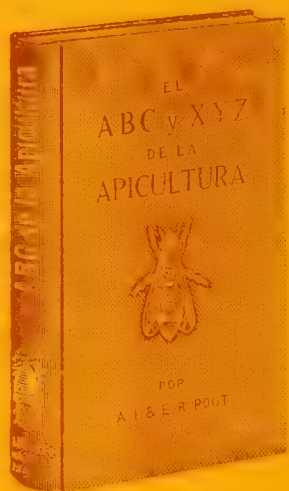
THE BEEKEEPERS' REVIEW
NORTHSTAR, MICHIGAN



The Authoritative Manual on
Apiculture

The A B C and X Y Z of BEE CULTURE

The combined editions of this wonderful book now aggregate over 160,000 copies sold. This volume contains more than twice the data that are contained in any other work on apiculture; printed in four languages, proving the popularity as an authority on the subject of Apiculture.



The A B C and X Y Z of Bee Culture will save you many times its cost by avoiding the expensive mistakes you would make without the help of a good text-book on the subject. It is the most widely read work on apiculture in the world, and a never failing encyclopedia of information for the professional and amateur beekeeper alike.

From the very beginning the A B C book seems to have filled a longfelt want. The first edition a modest one of 2,000 copies, was soon exhausted. Another edition was soon called for, until it became necessary to print 5,000 copies instead of 2,000; then 10,000 at a time, and finally 15,000 as we now do. This last edition (1913) was entirely reset from cover to cover, and this made it possible for the revisers to make more extensive revisions and additions than was ever before attempted.

Many of the pictures were taken by the author and reviser himself while making extensive trips covering a wide range of territory. A vast amount of valuable data has been gathered in this way, and incorporated into the A B C and X Y Z of Bee Culture.

The new power-driven extractors are amply illustrated and described; the subject of diseases of bees is given special prominence; laws relating to bees are for the first time given full treatment in the American edition. No other book treats of this very important subject. Honey, sugar, nectar and glucose, written by a United States government chemist, are carefully defined in accordance with our new pure-food laws. There is scarcely a practical device known to beekeepers anywhere but that is described in these books. Besides the immense amount of valuable material gathered through extensive travel, the works have been enriched with the choicest material that has appeared in Gleanings in Bee Culture, an illustrated semi-monthly by the same authors.

The new (1914) Spanish edition is now ready. This is a very careful translation of the last American Edition and we bespeak for it a widespread distribution which it richly deserves. Price \$2.00 in cloth. The French edition is not as recent, but will be found quite abreast with the times. This is a faithful reproduction of the American book. Price \$2.00. The German book contains a fund of information to any beekeeper wishing to post himself on up-to-date methods. Price \$2.50 per copy. American edition, \$2.00 in cloth



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